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**A REVISION OF THE TRIBE HISTERINI (COLEOPTERA,
HISTERIDAE) IN TAIWAN**

By MASAHIRO ÔHARA

Abstract

ÔHARA, M. 1999. A revision of the tribe Histerini (Coleoptera, Histeridae) in Taiwan. *Ins. matsum. n. s.* 56: 3–50, 30 figs., 5 tabs.

The Taiwanese Histerini are revised. Seven genera are recognized: *Margarinotus*, *Atholus*, *Asiaster*, *Hister*, *Pachylister*, *Merohister* and *Zabromorphus*. Three new species are described, namely, *Margarinotus (Grammostethus) formosanus*, *M. (Ptomister) osawai* and *M. (P.) babai*. One species, *Hister javanicus*, is newly recorded. A total of 20 species are now known from Taiwan and adjacent islets. Redescriptions are given for *Margarinotus (P.) multident* (Schmidt), *M. (P.) incognitus* (Marseul), *M. (G.) curvicolis* (Bickhardt), *Atholus philippinensis* (Marseul), and *Asiaster calcator* Cooman. Keys to the genera and species dealt with are provided.

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INTRODUCTION

The tribe Histerini is a cosmopolitan group of histerid beetles belonging to the subfamily Histerinae. Members of the tribe are characterized by the absence of a projection on the anterior margin of mesosternum and the straight tarsal groove of the protibia. Several species are notable for their importance in the biological control of dipteran pests, e.g., *Pachylister chinensis*, a well-studied Asian species preys on dipteran maggots in cow dung (Bornemissza, 1968).

Worldwide the tribe contains 26 genera and 528 species so far (Mazur, 1997). Of these only 7 genera and 18 species have been recorded from the Taiwanese region, and have not yet been revised, although we have some revisionary works on the tribe in Russia (Kryzhanovskij and Reichardt, 1976), Europe (Mazur, 1981; Vienna, 1980), Canada (Bousquet and Laplante, 1999), Korea (Ôhara, 1998) and Japan (Ôhara, 1989; 1992a, b, c; 1993; 1994).

The present study aims to provide a thorough taxonomic revision of the Taiwanese Histerini, including keys to genera and species, descriptions of new species, and redescriptions of known species. As a result, the Taiwanese Histerini are represented by 7 genera and 20 species. The terminology used herein are already explained in other papers of mine (Ôhara, 1989; 1994).

HISTORICAL

In 1913, Bickhardt first recorded 7 species of the Histerini from Taiwan on the material of Herrn Hans Sauter, and described *Hister curvicollis*. Lewis (1915) listed 16 species of the tribe on the basis of the collection of Dr. Tokuichi Shiraki. Kurosawa (1980), however, threw doubts about the local data of the specimens in the Shiraki collection. Miwa (1931), Kato (1933) and Kamiya and Takagi (1938) adopted the species names in the Lewis list. Since nobody have checked the reliability of the Shiraki specimens, some species in the Lewis list remains to be verified, viz, *Pachylister* (*Pachylister*) *lutarius* Erichson, *P. (Santalus) orientalis* (Paykull), *Hister congener* Schmidt and *H. thibetanus* Marseul. Cooman (1948) described *Asiaster calcator* as an endemic new species. Recently, Mazur (1997) added a species, *M. (P.) incognitus* (Marseul), to the fauna in his world catalogue of the family Histeridae.

TAXONOMY

TRIBE HISTERINI

The members of the tribe Histerini can be distinguished from other Histerinae by the absence of a projection on the anterior margin of mesosternum, the straight tarsal groove of the protibia, the bilobate anal lobe of hind wing and the spermatheca of female consisting of several small sacs each with slender tube basally. In Taiwan there are 7 genera in the tribe: *Margarinotus*, *Atholus*, *Asiaster*, *Hister*, *Pachylister*, *Merohister* and *Zabromorphus*.

Key to the Taiwanese genera of the tribe Histerini

- | | | | |
|---|-----|--|-----------------------------------|
| 1 | (2) | External subhumeral stria complete. | <i>Margarinotus</i> Marseul, 1853 |
| 2 | (1) | External subhumeral stria not complete. | |

- | | | | |
|----|------|---|---------------------------------|
| 3 | (6) | Anterior margin of mesosternum straight or feebly curved outwardly. | |
| 4 | (5) | Ventral side of protibia only with several denticles (2–8) along outer margin. Prosternum and intercoxal disk of mesosternum without hair | <i>Atholus</i> Thomson, 1859 |
| 5 | (4) | Ventral side of protibia with many denticles (more than 25). Prosternum and intercoxal disk of mesosternum with dense hairs. | <i>Asiaster</i> Cooman, 1948 |
| 6 | (3) | Anterior margin of mesosternum emarginate medially. | |
| 7 | (8) | Anterior margin of labrum projected. | <i>Pachylister</i> Lewis, 1900 |
| 8 | (7) | Anterior margin of labrum straight or round. | |
| 9 | (10) | Dorsal surface of elytra covered with coarse punctures. | <i>Zabromorphus</i> Lewis, 1906 |
| 10 | (9) | Dorsal surface of elytra shining, without coarse punctures. | |
| 11 | (12) | Lateral area of pronotum without coarse punctures. | <i>Hister</i> Linnaeus, 1758 |
| 12 | (11) | Lateral area of pronotum covered with coarse punctures. .. | <i>Merohister</i> Reitter, 1909 |

GENUS MARGARINOTUS MARSEUL, 1853

Margarinotus: Ôhara, 1989, 6.

The Taiwanese *Margarinotus* has been represented by five species, *multidens*, *incognitus*, *boleti*, *curvicollis* and *niponicus* (Bickhardt, 1913; Lewis, 1915; Mazur, 1997). In this study, I recognized six species of *Margarinotus* from Taiwan, which belong to two subgenera, *Ptomister* Houlbert et Monnot and *Grammostethus* Lewis. The subgenus *Ptomister* includes four species, two of them are new species. The other subgenus *Grammostethus* is represented by two species, one of them is a new species and probably has been referred to *niponicus*.

Key to the Taiwanese species of the genus *Margarinotus**

- | | | | |
|----|------|---|--|
| 1 | (8) | Pronotum with two lateral pronotal striae (Subgenus <i>Ptomister</i>). | |
| 2 | (3) | Number of denticles of protibia 20–21. | <i>M. multidens</i> (Schmidt, 1889) |
| 3 | (2) | Number of denticles of protibia 3–8. | |
| 4 | (7) | Inner pronotal lateral stria complete and straight on anterior portion. | |
| 5 | (6) | Lateral stria of metasternum not united with oblique stria. Basal rudiment of 5th dorsal elytral stria absent. | <i>M. incognitus</i> (Marseul, 1854) |
| 6 | (5) | Lateral stria of metasternum united with oblique stria. Basal rudiment of 5th dorsal elytral stria present as an arc. | <i>M. osawai</i> M. Ôhara, n. sp. |
| 7 | (4) | Inner pronotal lateral stria interrupted behind eyes, and sinuate on anterior portion. | <i>M. babai</i> M. Ôhara, n. sp.** |
| 8 | (1) | Pronotum with one lateral stria (Subgenus <i>Grammostethus</i>). | |
| 9 | (10) | Sutural stria of elytron complete. Propygidium and pygidium partially reddish-brown. Prosternal keel with carinal stria. | <i>M. curvicollis</i> (Bickhardt, 1913) |
| 10 | (9) | Sutural stria present on apical half. Pygidia wholly black. Prosternal keel without carinal stria. | <i>M. formosanus</i> M. Ôhara, n. sp.*** |

*: *Margarinotus* (*Ptomister*) *reichardti* Kryzhanovskij was erroneously recorded from Taiwan by Ôhara (1994: 141). This species has not been found in Taiwan.

**: This species has been referred to *boleti*.

***: This species has been referred to *niponicus*.

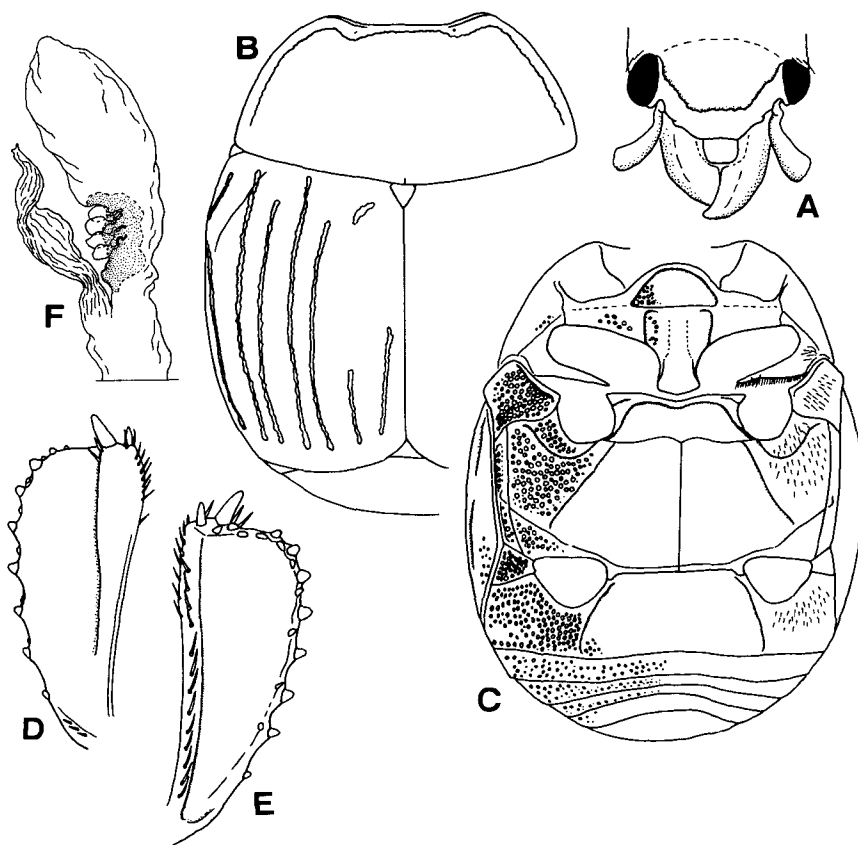


Fig. 1. *Margarinotus (Grammostethus) formosanus* M. Ôhara, n. sp. A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Female genitalia, spermatheca, vagina and bursa copulatrix, lateral view (left side). [A–E: no. 9921, Songkang; F: no. 9955, Shihou, Alishan].

SUBGENUS GRAMMOSTETHUS LEWIS, 1906

Margarinotus (Grammostethus) formosanus M. Ôhara, n. sp.
(Figs. 1–3)

Hister (Grammostethus) niponicus: Bickhardt, 1913, 172 [Hoozan]; Miwa, 1931, 57 [Arisan]; Kamiya and Takagi, 1938, 31.

Grammostethus niponicus: Lewis, 1915, 55 [Arisan].

Type material. Holotype (SEHU: Laboratory of Systematic Entomology, Faculty of Agriculture, Hokkaidô University, Sapporo, Japan). Male. Point-mounted; genitalia dissected; genitalia in balsam on a plastic slide; labeled: 1. “Sonkan (alt. 2,000 m), Nantou prov., 2/iv/1986, M. Ôhara”; 2. “M. Ôhara, No-9954”; 3. “Holo-type, *Margarinotus (Grammostethus) formosanus* M. Ôhara” (red

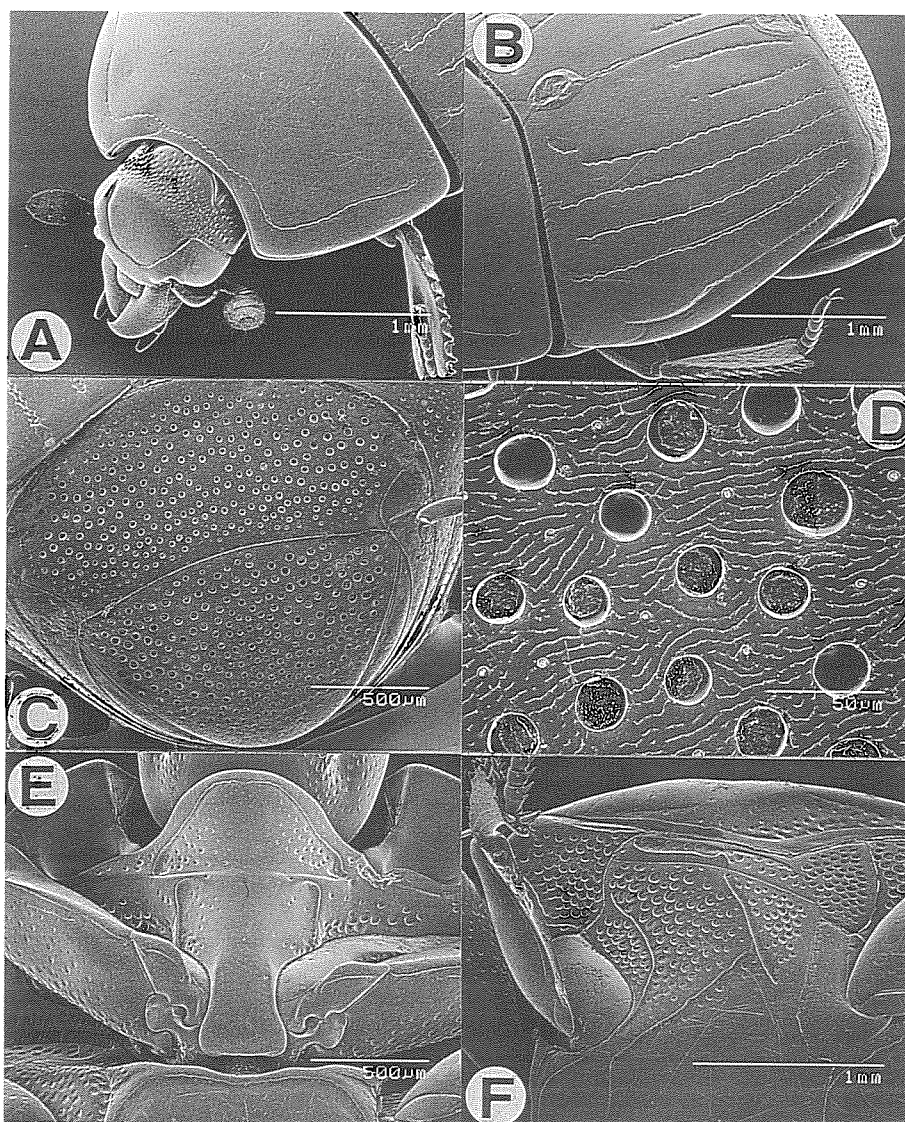


Fig. 2. *Margarinotus (Grammostethus) formosanus* M. Ôhara, n. sp. A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–D: no. 9941, Liukuei, E–F: no. 9922, Liukuei].

label). Paratypes, 118 exs. Taipei Hsien: Chintienkan (2 female, 24/viii/1934), Y.Y. Lien. Taoyuan Hsien: Palin (6 exs., 26/x/1987), J. Luo. Taichung Hsien: Malipulu (1 ex., 28/iv/1986), K. Masumoto. Nantou Hsien: Same data as holotype (68 exs.); (1 male and 1 female, 28/vii/1990), native collector; Nanshanchi (3 exs., 25/iii/1974), K. Masumoto; (3 exs., 13/iv/1986), M. Ôhara; Mufu-zhongxin (20 exs., 27/vii/1983), J. Luo; Shiztou, Puli (3 exs., 31/x/1987), J. Luo; (1 ex., 5/xi/1989), native collector; Meifeng (1 ex., 13/v/1973), H. Yokoyama; (1 male and 1 female, 30/vi/1994), C. Luo; Kuantaoshan

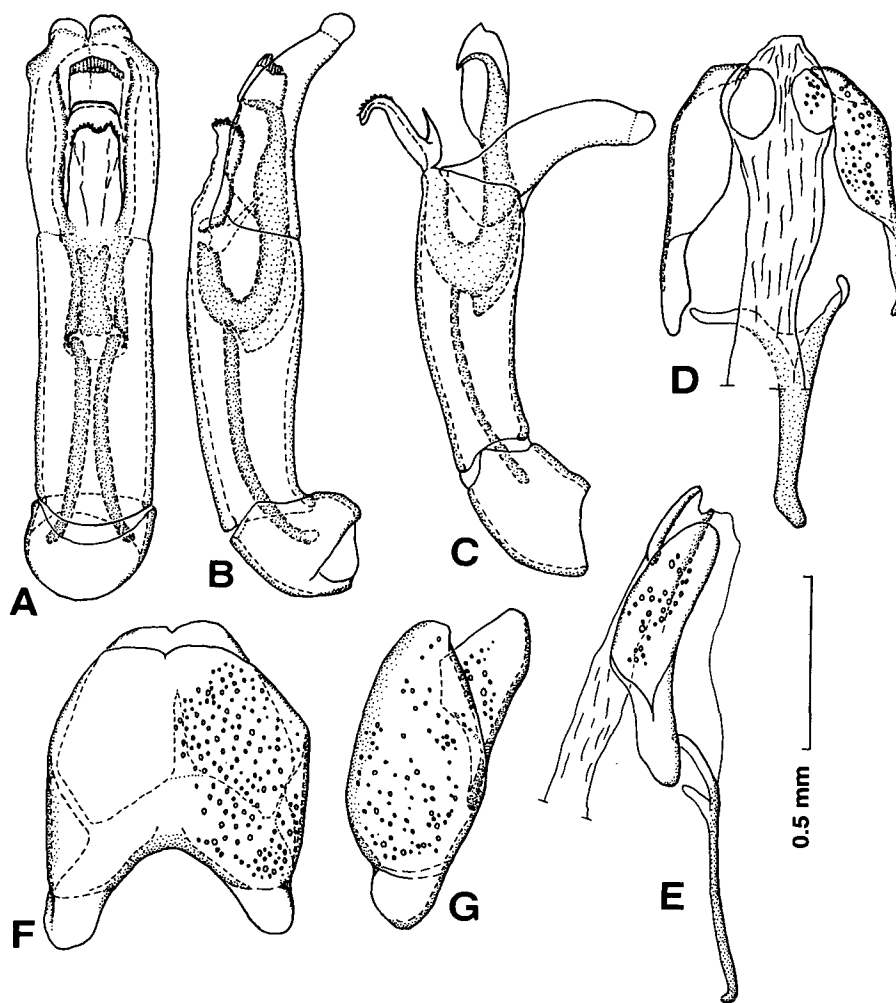


Fig. 3. *Margarinotus (Grammostethus) formosanus* M. Ôhara, n. sp. Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ditto, median lobe extruded, lateral view. D: Ninth and 10th tergites and 9th sternum (spicule), dorsal view. E: Ditto, lateral view. F: Eight tergite and sternum, dorsal view. G: Ditto, lateral view. [A-B, D-G: no. 9922, Liukuei].

(1 ex., 9/iv/1990), native collector. Chiai Hsien: Shihou, Alishan (2 exs., 9/iv/1986), M. Ôhara. Kaoshiung Hsien: Taoyuang (2 exs., 2/v/1986), M. Ôhara; Liukuei (1 female and 1 ex., 16/ix/1988), W.L. Chen.

Description. Body length, PPL (see page 10, footnote), male, 3.57–5.44 mm, female, 3.88–4.70 mm. PEL, male, 3.13–4.38 mm, female, 3.38–3.76 mm. Width, male, 3.01–3.39 mm, female, 2.76–3.86 mm. Biometric data are given in Table 1. Body oval, black and shining; antennae, tibiae and tarsi reddish brown.

Frontal stria of head (Fig. 1A) complete and well impressed. Disk of head sparsely clothed with fine punctures, which are separated by five to seven times their diameter.

Marginal pronotal stria (Fig. 1B) broadly interrupted behind head, complete laterally.

Lateral pronotal stria complete, crenate, and its apical portion strongly sinuate behind eyes. Disk of pronotum sparsely clothed with microscopic punctures, and with a longitudinal puncture in antescutellar area.

Epipleura of elytra deeply excavated, and coarsely and sparsely punctate. Marginal epipleural stria deeply and completely impressed. Marginal elytral stria deeply impressed and shortly interrupted at middle. External subhumeral stria well impressed, shortened on basal fourth and apical eighth. Internal subhumeral stria absent. Oblique humeral stria present on basal third. First – 4th dorsal striae complete and crenate, 2nd and 4th slightly shortened at base. Fifth dorsal stria usually present on apical third, its basal rudiment represented by a short arc. Sutural stria present on apical half to third. Disk of elytra sparsely clothed with fine punctures.

Pygidia (Fig. 2C) alutaceous. Propygidium with a feebly depression at each side, densely covered with coarse and deep punctures, which are separated by one-third to twice their diameter, and with fine punctures sparsely intermingled with the coarse ones. Pygidium similarly punctate, but a little more densely; area along apical margin without punctures.

Prosternal lobe round at apex, its marginal stria interrupted at middle, well impressed and subcariniform laterally. Disk of lobe coarsely punctate on lateral area. Prosternal keel without carinal stria (sometimes present but rudimentary).

Anterior margin of mesosternum (Fig. 1C, 2E) feebly emarginate at middle, its marginal stria complete and subcariniform, and another short stria present behind each anterior angle. Disk of mesosternum sparsely clothed with fine punctures, which are separated by about ten times their diameter. Meso-metasternal suture complete, subcariniform. Lateral stria of mesosternum (Fig. 2F) extending obliquely and posteriorly, and not united with the oblique

Table 1. Biometric data* for *Margarinotus (Grammostethus) formosanus* M. Ôhara, sp. nov.

	Male	Female
APW	1.16–1.32 (1.24±0.009) 26	1.04–1.44 (1.32±0.011) 38
PPW	2.63–2.89 (2.75±0.012) 26	2.32–3.20 (2.96±0.025) 38
PL	1.25–1.41 (1.35±0.007) 26	1.16–1.63 (1.48±0.012) 38
EL	1.88–2.13 (1.98±0.013) 26	1.79–2.76 (2.19±0.025) 38
EW	3.01–3.39 (3.22±0.018) 26	2.76–3.86 (3.53±0.030) 38
ProW	1.76–2.13 (1.92±0.015) 26	1.66–2.38 (2.12±0.020) 38
ProL	0.69–0.85 (0.79±0.007) 26	0.66–1.00 (0.89±0.010) 38
PyL	0.88–1.13 (0.99±0.011) 26	0.94–1.32 (1.14±0.011) 38
PTL	0.94–1.04 (0.98±0.007) 26	0.78–1.19 (1.03±0.010) 38
MSTL	0.94–1.13 (1.04±0.008) 26	0.82–1.19 (1.09±0.012) 38
MTTL	1.16–1.38 (1.30±0.013) 26	1.07–1.57 (1.40±0.014) 38

* Measurements of some body parts are given in tables in the order of range, mean ± standard error (all in mm), and sample size. Abbreviations used in the measurements are as follows: PPL: length between anterior angles of pronotum and apex of pygidium, PEL: length between anterior angles of pronotum and apices of elytra, APW: width between anterior angles of pronotum, PPW: width between posterior angles of pronotum, PL: length of pronotum along mid line, EL: length of elytron along sutural line, EW: maximal width between outer margins of elytra, ProW: maximal width of propygidium, ProL: length of propygidium, PyL: length of pygidium, PTL: length of protibia, MSTL: length of mesotibia, MTTL: length of metatibia. See also Ôhara (1994: 8, fig. 2).

stria that extends inwardly from the middle of the metasternal-metepisternal suture. Post-mesocoxal stria extending along the posterior margin of mesocoxa and its outer end attaining to middle of metasternal-mesepimeral suture. Intercoxal disk of metasternum sparsely clothed with fine punctures throughout and a few coarse punctures along the lateral stria. Lateral disk of metasternum densely covered with large punctures on basal half, the punctures becoming sparser on apical half, with fine ones intermingled.

Intercoxal disk of 1st abdominal sternum completely striate on each side, and sparsely clothed with fine punctures.

Protibia (Fig. 1D, E) with 8 large denticles on outer margin. Profemur with posterior marginal stria on apical eighth.

Male genitalia as shown in Fig. 3. Ratio in length of parameres to basal piece about 5.2.

Female genitalia as shown in Fig. 1F. Spermatheca consisting of 4 small sac.

Distribution. Taiwan.

Remarks. This species is very similar to *M. (G.) niponicus* (Lewis) from Japan, but it is distinguished by the following characters: absence of carinal stria of the prosternal keel, the marginal stria of prosternal lobe interrupted at middle, the fine punctation of intercoxal disk of the 1st abdominal sternum, and the structures of the male genitalia. Bickhardt (1913) and Lewis (1915) recorded *niponicus* from Taiwan. Their records probably refer to this new species. This species belongs to the group of *M. ruficornis* in regard of the structures of the male genitalia (Ôhara, 1989). It usually occurs in fresh cow dung and sometimes under carrion, while *niponicus* does not occur in cow dung.

Margarinotus (Grammostethus) curvicollis (Bickhardt, 1913)
(Figs. 4–6)

Hister (Grammostethus) curvicollis Bickhardt, 1913, 172 [Taiwan: Kankau, Koshun (= Hengchun), Ping-tong Hsien]; Miwa, 1931, 57 [Kôshun]; Kamiya and Takagi, 1938, 31.

Grammostethus curvicollis: Lewis, 1915, 55 [listed].

Margarinotus curvicollis: Wenzel, 1944, 126 [listed].

Margarinotus (Grammostethus) curvicollis: Mazur, 1984, 175 [cataloged].

Description. Male. PPL, male, 4.0–4.1 mm, female, 4.0 mm, PEL, male, 3.0–3.05 mm, female, 3.05 mm. Width, male, 2.70–3.01 mm, female, 2.7 mm. Biometric data are given in Table 2. Body oval, black and shining; legs, antennae, mouth parts, lateral area of propygidium and a broad area along basal margin of pygidium reddish-brown.

Frontal stria of head (Fig. 4A) complete, subcariniform and regularly curved anteriorly. Disk of head moderately punctate with microscopic punctures intermingled, the punctures becoming coarser along basal margin.

Anterior margin of pronotum (Fig. 4B) bisinuate, the median portion regularly and outwardly arcuate. Marginal pronotal stria complete laterally, and broadly interrupted behind head. Lateral stria complete, subcariniform and strongly crenate, its apical portion behind head regularly arcuate; the stria sometimes interrupted behind eyes. Disk of pronotum evenly covered with moderate punctures and with microscopic punctures intermingled. Antescutellar area feebly depressed and with a longitudinal puncture.

Epipleural fossette sparsely covered with coarse punctures along outer margin. Marginal elytral stria absent. Marginal epipleural stria complete and well impressed. External

Table 2. Biometric data for *Margarinotus (Grammostethus) curvicollis* (Bickhardt).

	Male			Female (n=1)
APW	1.00-1.10	(1.05)	3	1.00
PPW	2.32-2.40	(2.43)	3	2.25
PL	1.32-1.47	(1.38)	3	1.25
EL	1.69-1.90	(1.78)	3	1.75
EW	2.76-3.01	(2.90)	3	2.70
ProW	1.57-1.82	(1.70)	3	1.50
ProL	0.80-0.94	(0.84)	3	0.80
PyL	0.80-0.91	(0.84)	3	0.80
PTL	0.94-1.00	(0.96)	3	0.95
MSTL	0.88-1.00	(0.96)	3	0.90
MTTL	1.19-1.32	(1.25)	3	1.15

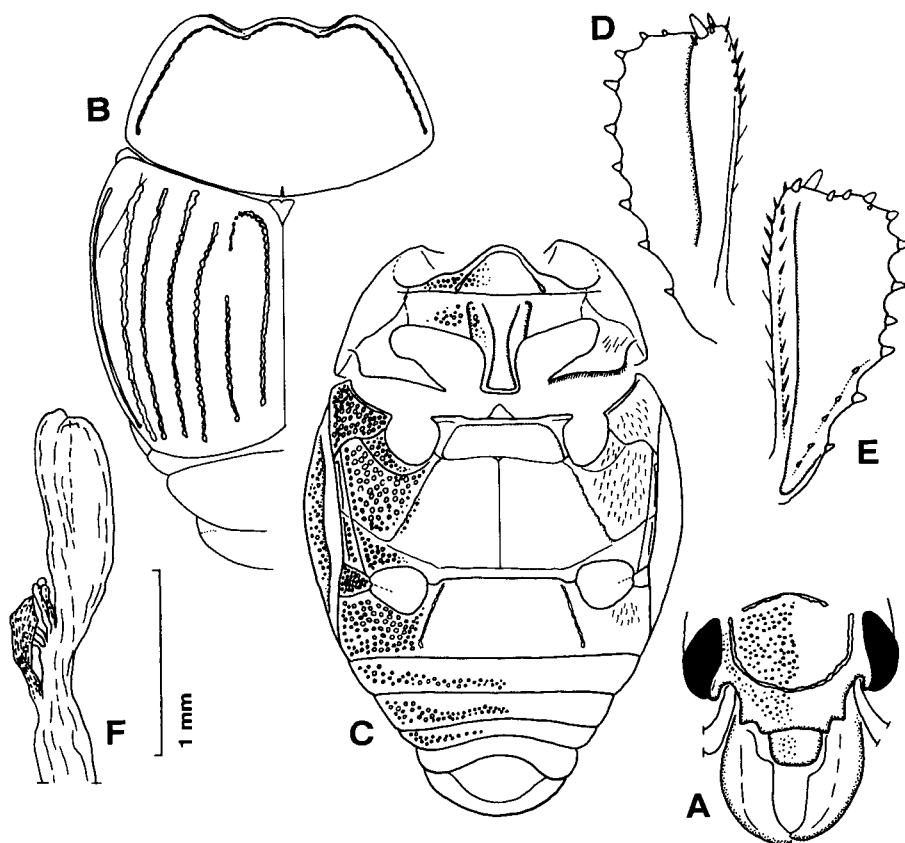


Fig. 4. *Margarinotus (Grammostethus) curvicollis* (Bickhardt). A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Female genitalia, spermatheca, vagina and bursa copulatrix, lateral view (left side). [A–E: no. 9923, Meiyuan; F: no. 9924, Meiyuan].

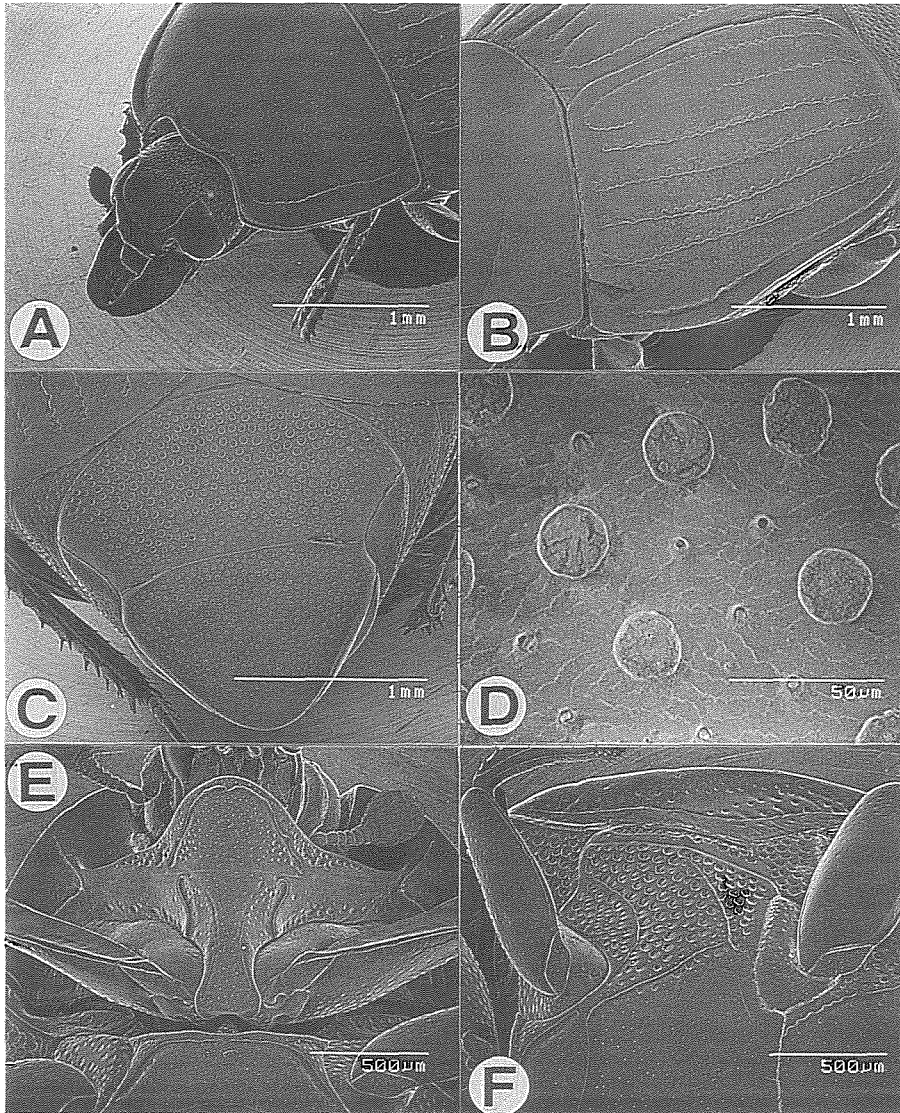


Fig. 5. *Margarinotus (Grammostethus) curvicollis* (Bickhardt). A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–D: no. 9923, Meiyuan, Nantou; E–F: no. 9940, Palin, Taoyuan].

subhumeral stria (Fig. 4B) complete and deeply impressed. Internal subhumeral stria absent. Oblique humeral stria present on basal third. First – 4th dorsal striae complete, well impressed and strongly crenate. Fifth dorsal stria present on apical half, with a long rudiment on basal fourth. Sutural stria complete, usually its basal end connected with basal rudiment of 5th dorsal stria by an arc. Surface of elytra densely covered with fine punctures.

Pygidia feebly alutaceous (Fig. 5C). Propygidium with an elevation on lateral area

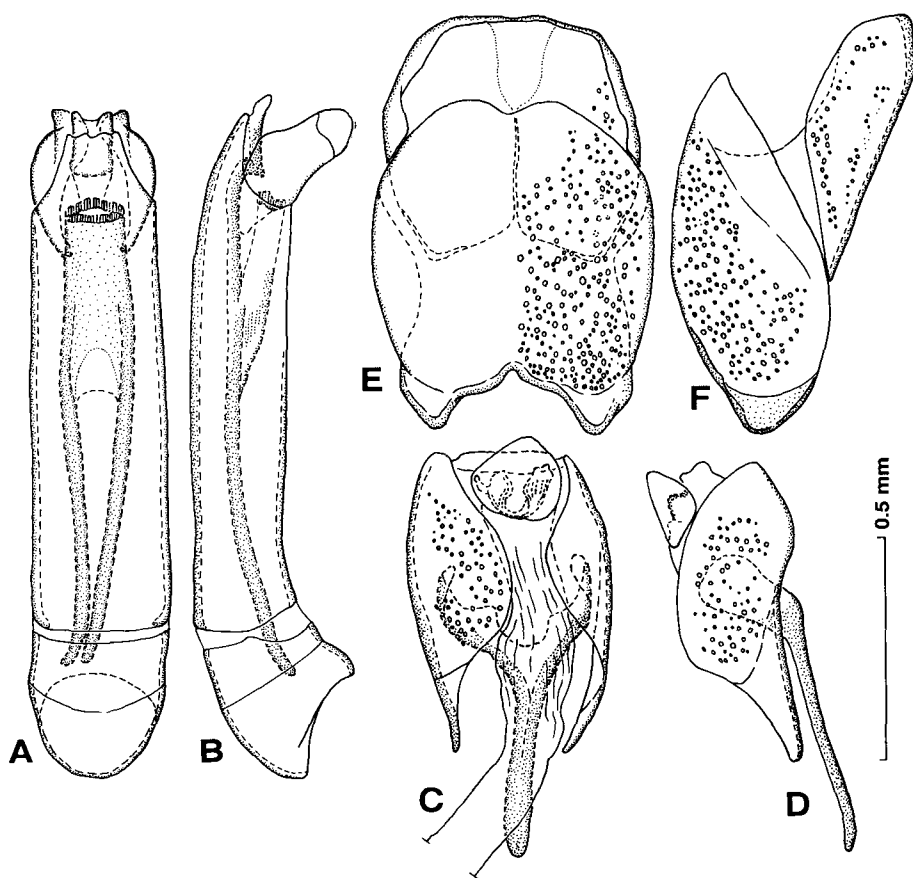


Fig. 6. *Margarinetus (Grammostethus) curvicollis* (Bickhardt). Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ditto, lateral view. E: Eighth tergite and sternum, dorsal view. F: Ditto, lateral view. [A–F: no. 9923, Meiyuan].

and a feeble depression behind each posterior angle; surface densely covered with large and shallow punctures, which are separated by their own diameter to one-fourth the diameter; fine punctures intermingled among the large punctures. Punctuation of pygidium similar to propygidial one, but sparser and fine, becoming finer apically.

Prosternal lobe rounded at apex (Fig. 4C, 5E), its marginal stria well impressed, subcariniform and complete; disk covered with coarse punctures. Prosternal keel with carinal striae on its whole length.

Anterior margin of mesosternum (Fig. 4C, 5E) nearly straight, its marginal stria complete and subcariniform, and with another short stria behind each anterior angle. Disk of mesosternum sparsely clothed with fine punctures. Meso-metasternal suture complete, subcariniform and sinuate. Lateral stria of metasternum (Fig. 5F) extending obliquely and posteriorly, and united with oblique stria that extends inwards from the middle of metasternal-metepisternal suture. Intercostal disk of metasternum sparsely clothed with fine punctures, and with coarse punctures along the lateral stria. Lateral disk of metasternum densely covered with large and shallow punctures; without hair.

Intercoxal disk of 1st abdominal sternum striate on each side and finely punctate, the punctures becoming coarser laterally.

Protibia with 8 denticles on external margin (Fig. 4D, E). Profemur with short posterior marginal stria on apical fifth.

Male genitalia as shown in Fig. 6. Ratio in length of parameres to basal piece about 3.5.

Female genitalia as shown in Fig. 4F. Spermatheca consisting of 5 small sacs.
Specimens examined.

[Proper] Taoyuan Hsien: Palin (1 male, 26/iii/1986), M. Ôhara. Hsinchu Hsien: Shangping (1 male, 1, 2/v/1986), K. Masumoto. Nantou Hsien: Meiyuan (1 male, 21/v; 1 female, 24/v/1981), Chin-Kin Yu.

Distribution. Taiwan.

Remarks. This species is easily distinguished from the other Taiwanese Histerini by the color pattern of the propygidium and pygidium. Mazur (1975) described an allied species, *M. (G.) meridionalis*, from India. *M. curvicollis* belongs to the type of *M. ruficornis* in regard of the structures of the male genitalia (Ôhara, 1989).

SUBGENUS PTOMISTER HOULBERT ET MONNOT, 1923

Margarinotus (Ptomister) incognitus (Marseul, 1854) (Fig. 7–9)

Hister incognitus Marseul, 1854, 289 [India].

Margarinotus incognitus: Wenzel, 1944, 126; Mazur, 1997, 94 [Taiwan].

Description. Body length, PPL, male, 5.3–7.5 mm, female, 6.4–8.4 mm, PEL, male, 4.9–6.4 mm, female, 5.8–7.1 mm. Width, male, 4.0–5.2 mm, female, 4.8–5.9 mm. Biometric data are given in Table 3. Body oblong-oval, black and shining.

Frontal stria of head (Fig. 7A) complete and well impressed, and interrupted and bent inwards at middle; disk sparsely and finely punctate, the punctures separated by two to four times their diameter.

Marginal pronotal stria (Fig. 7B) complete laterally and broadly interrupted behind head. Outer lateral stria usually present on apical half, and sometimes its basal end extends to basal two-thirds, but not extending beyond end of inner lateral stria. Inner lateral stria complete, straight on apical portion. Disk of pronotum evenly and finely punctate, the punctures sometimes becoming coarser between two lateral striae. Antescutellar area with a longitudinal punctures.

Epipleural fossette feebly excavate and densely covered with large punctures. Marginal elytral stria absent. Marginal epipleural stria complete and with large punctures. External subhumeral stria (Fig. 7B) deeply impressed and abbreviated at basal sixth. Internal subhumeral stria absent. Oblique humeral stria present on basal third. First to 3rd dorsal striae complete and feebly crenate, but the 3rd sometimes obsolete on apical half; basal end of the 2nd feebly bent outwards. Fourth dorsal stria on apical third rudimentary, often absent. Fifth stria represented by a few punctures apically. Sutural stria represented by a few punctures or a fragmental stria on apical fourth. Disk of elytra with subapical depression.

Pygidia (Fig. 8C) finely alutaceous. Propygidium densely covered with coarse punctures, which are separated by half to twice their diameter, with a few moderately sized

Table 3. Biometric data for *Margarinotus (Ptomister) incognitus* (Marseul).

	Male			Female			Type
APW	1.6-2.0	(1.84±0.033)	11	1.8-2.2	(1.95±0.045)	9	2.0
PPW	3.5-4.6	(4.16±0.883)	11	4.0-5.1	(4.58±0.118)	9	5.0
PL	1.7-2.3	(2.02±0.047)	11	2.0-2.4	(2.21±0.045)	9	2.3
EL	2.8-3.5	(3.19±0.058)	11	3.2-4.1	(3.59±0.091)	9	3.9
EW	4.0-5.2	(4.76±0.106)	11	4.7-5.9	(5.34±0.133)	9	5.8
ProW	2.4-3.4	(3.01±0.073)	11	3.1-3.9	(3.49±0.095)	9	3.9
ProL	1.1-1.4	(1.28±0.031)	11	1.3-1.7	(1.51±0.036)	9	1.6
PyL	1.4-1.8	(1.56±0.034)	11	1.2-2.0	(1.84±0.051)	9	2.0
PTL	1.4-1.7	(1.57±0.027)	11	1.2-1.8	(1.70±0.030)	9	1.8
MSTL	1.4-1.8	(1.63±0.032)	11	1.6-2.0	(1.77±0.047)	9	2.0
MTTL	1.8-2.3	(2.10±0.040)	11	2.0-2.5	(2.31±0.066)	9	2.4

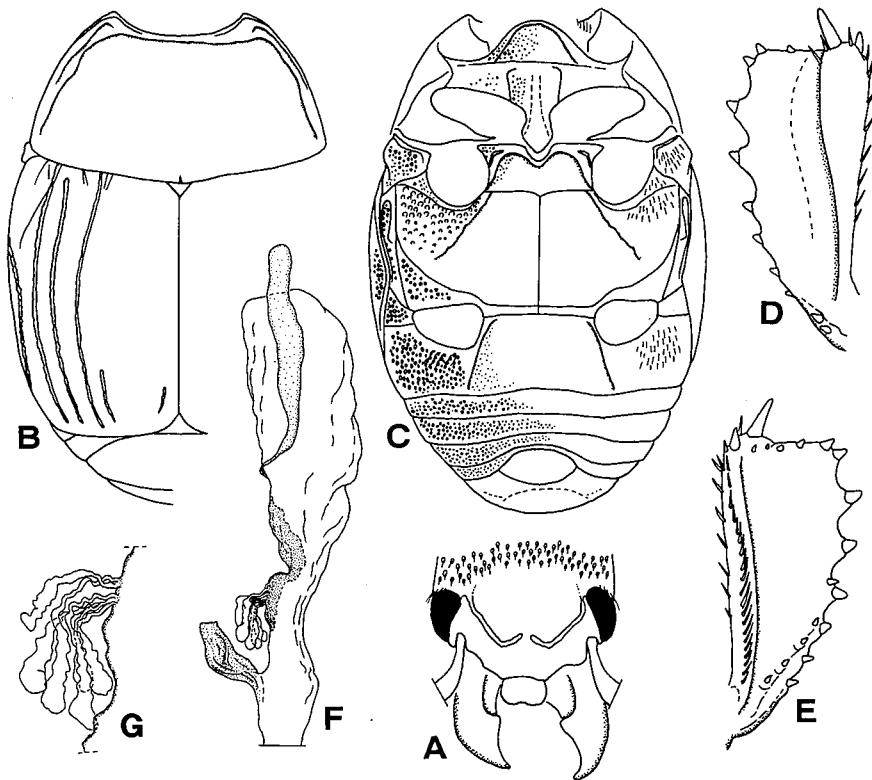


Fig. 7. *Margarinotus (Ptomister) incognitus* (Marseul). A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult, ventral view. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Female genitalia, spermatheca, vagina and bursa copulatrix, lateral view (left side). G: Spermatheca. [A-E: no. 9916, Suihou, Alishan; F, G: no. 9920, Alishan].

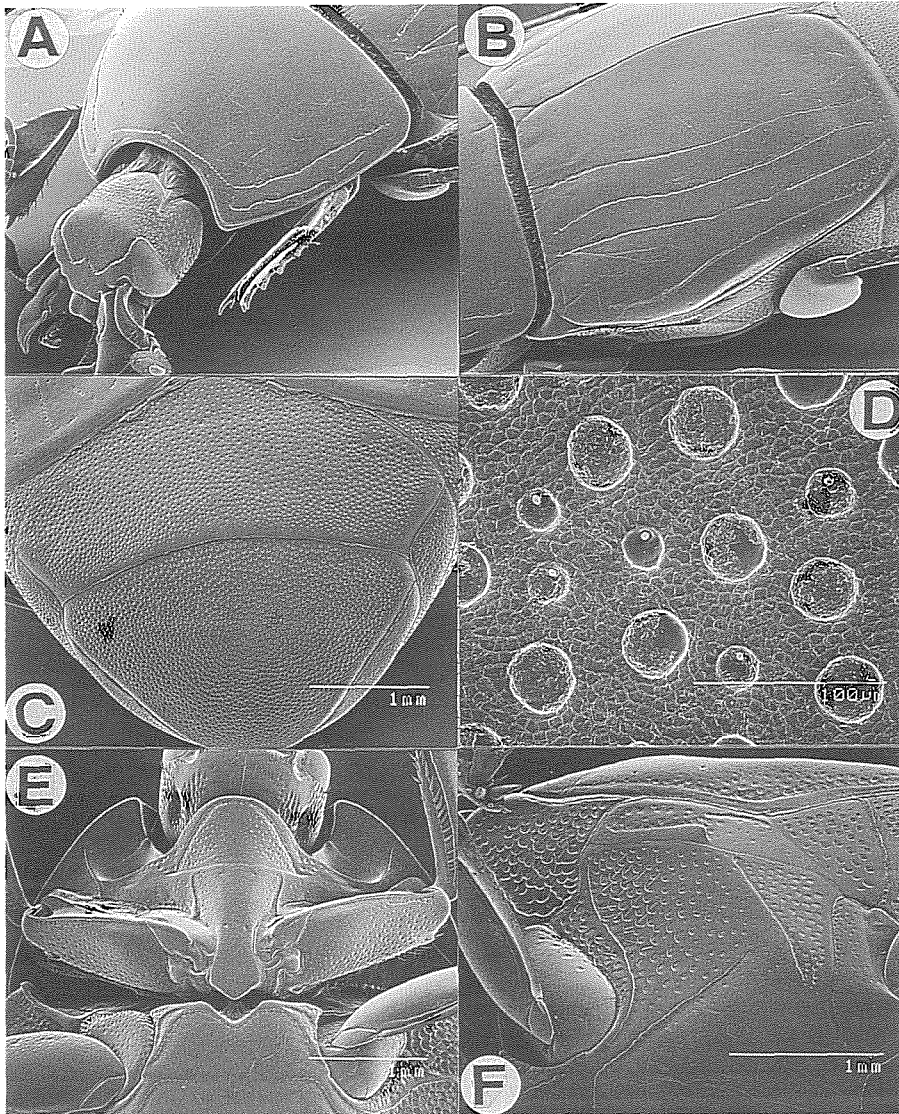


Fig. 8. *Margarinotus (Ptomister) incognitus* (Marseul). A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–D: no. 9936, Liukuei; E–F: no. 9934, Shihou].

punctures intermingled. Pygidium more densely punctate than propygidium, the punctures minute at apex.

Prosternal lobe (Fig. 7C, 8E) round at apex, its marginal stria narrowly interrupted at middle. Disk of lobe coarsely punctate, the punctures becoming finer medially. Prosternal keel without carinal stria.

Anterior margin of mesosternum (Fig. 8E) deeply emarginate at middle, its marginal stria complete and subcariniform, and another short stria present behind anterior angle.

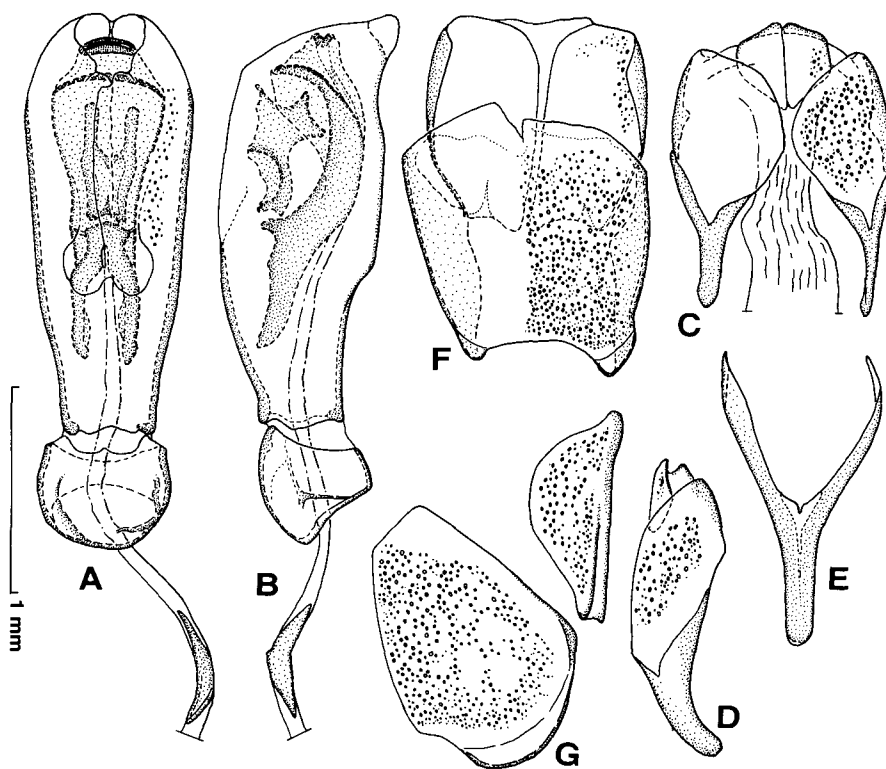


Fig. 9. *Margarinotus (Ptomister) incognitus* (Marseul). Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ditto, lateral view. E: Ninth sternum (spicule), dorsal view. F: Eighth tergite and sternum, dorsal view. G: Ditto, lateral view. [no. 9916, Suihou, Alishan].

Disk of mesosternum sparsely covered with fine punctures, which are separated by about five times their diameter. Meso-metasternal suture obtusely angulate at middle. Lateral metasternal stria (Fig. 8F) well impressed and carinate, extending obliquely and posteriorly, and not united with the oblique stria that extends inwards from the middle of metasternal-metepisternal suture. Post-mesocoxal stria extending along the basal margin of mesocoxa and its outer end attaining to middle of metasternal-mesepimeral suture. Intercoxal disk of metasternum sparsely clothed with fine punctures, and feebly depressed along the longitudinal suture. Lateral disk of metasternum densely covered with large and shallow punctures, which become finer posteriorly, and with long hairs.

Intercoxal disk of 1st abdominal sternum with sparse fine punctures; coarse punctures along 1st abdominal stria. First abdominal stria complete and deeply impressed.

Protibia (Fig. 7D, E) with 6 to 8 denticles on outer lateral margin and 3 to 4 small denticles on apical margin. Ventral surface of profemur with posterior marginal stria on apical fourth.

Male genitalia as shown in Fig. 9. Ratio in length of paramera to basal piece of aedeagus 3.86.

Female genitalia as shown in Fig. 7F and G. Spermatheca consisting of 6 small sacs.

Specimens examined.

Type material. Type (Muséum Naturelle, Paris). 1 ex. Sex undetermined, pinned; labeled: 1. “85, *Hister incognitus* m.”; 2. “Muséum Paris, Coll. De Marseul, 2842-90.”; 3. “Type”; 4. “85, *Hister incognitus* m.”.

[Proper] Nantou Hsien: Suifeng, alt. 2,400 m (1 female, 2/iv/1986), M. Suwa. Chiai Hsien: Shihou, alt. 2,318 m, Alishan, (10 males and 7 females, 9/iv/1986), M. Ôhara; Alishan, alt. 2,300–2,500 m (1 male and 4 females, 8/iv/1986), M. Ôhara; (1 male, 8/vii/1979), M. Suwa. Hualien Hsien: Tayulin, alt. 2,656 m (1 ex., 14/viii/1989), M. Ôhara.

Distribution. Taiwan (Highlands), India, Himalaya, Nepal.

Remarks. I have had an opportunity to examine the type specimen of *M. incognitus* from India. According to my careful comparison with the type the Taiwanese specimens differ in the following characters: the basal end of outer pronotal lateral stria does not extend to the end of inner one; the fourth dorsal elytral stria present on apical fourth; the marginal stria of the prosternal lobe not broadly interrupted at middle; the anterior margin of the prosternal lobe not strongly projected; the lateral disk of metasternum furnished with hairs; the punctures of the first abdominal sternum becoming coarser laterally. Dr. S. Mazur (personal communication), however, found several geographical forms of the species on the basis of Nepalese, Chinese, Indian and Taiwanese specimens, including the form noted here. As to the structure of the male genitalia, *incognitus* is also similar to *M. striola succicola*. The differences observed between the species and *M. striola* involve the shape of median armature of median lobe of the male genitalia and the coarse punctures of meso- and metasterna of *M. striola*. *M. incognitus* belongs to the *weymarni*-group (Ôhara, 1989). This species occurs under carrion and human excrement.

Margarinotus (Ptomister) multidens (Schmidt, 1889)

(Figs. 10–12)

Hister multidens Schmidt, 1889, 94 [Burma]; Lewis, 1915, 55.

Hister (Hister) multidens: Bickhardt, 1910, 46 [cataloged]; Bickhardt, 1913, 171 [Kosempo, Kaoshiung Hsien]; Desbordes, 1919, 391; Bickhardt, 1920, 98, 100; Miwa, 1931, 56 [Kôsenpô]; Kamiya and Takagi, 1938, 30; Reichardt & Kryzhanovskij, 1964, 172 [China, Kuatun, noted].

Margarinotus multidens: Wenzel, 1944, 126.

Table 4. Biometric data for *Margarinotus (Ptomister) multidens* (Schmidt).

	Male	Female
APW	1.6-2.1 (1.85±0.020) 30	1.7-2.0 (1.89±0.013) 37
PPW	3.7-4.7 (4.37±0.048) 30	4.1-4.9 (4.59±0.035) 37
PL	1.9-2.5 (2.35±0.029) 30	2.1-2.7 (2.43±0.027) 37
EL	2.4-3.0 (2.78±0.033) 30	2.7-3.3 (3.03±0.025) 37
EW	4.2-5.4 (5.00±0.052) 30	4.7-5.9 (5.38±0.042) 37
ProW	2.6-3.3 (3.05±0.034) 30	3.0-3.8 (3.37±0.030) 37
ProL	1.2-1.6 (1.40±0.018) 30	1.3-1.8 (1.54±0.019) 37
PyL	1.3-1.8 (1.59±0.022) 30	1.5-2.0 (1.78±0.015) 37
PTL	1.4-1.8 (1.66±0.019) 30	1.5-1.9 (1.72±0.014) 37
MSTL	1.3-1.9 (1.71±0.026) 30	1.5-1.9 (1.73±0.017) 37
MTTL	1.6-2.4 (2.17±0.032) 30	1.9-2.4 (2.24±0.020) 37

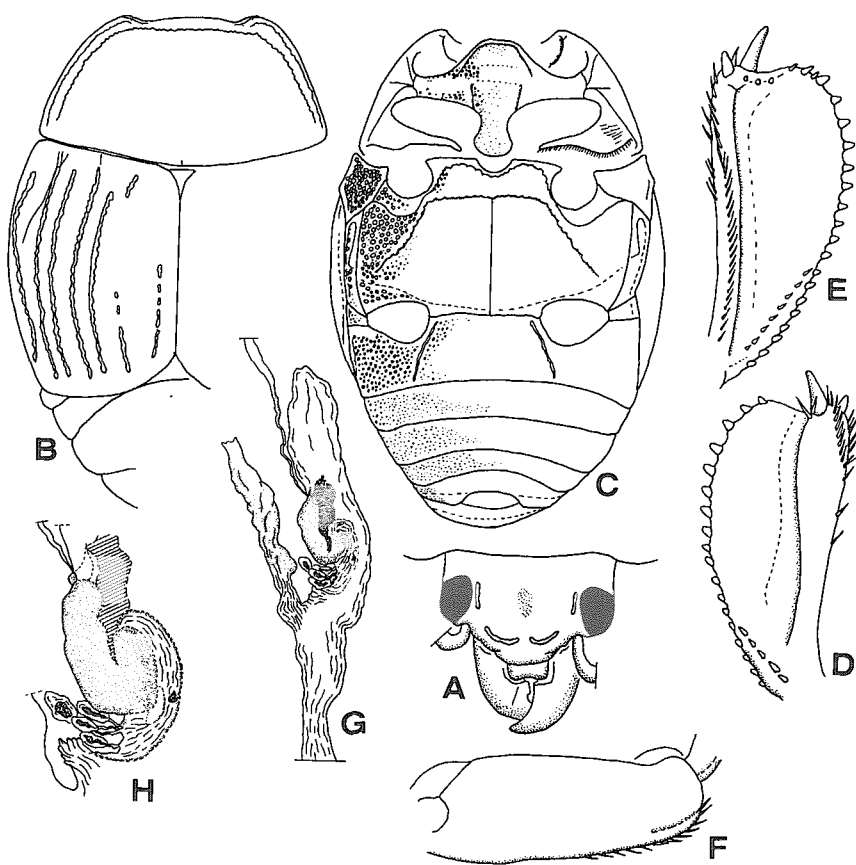


Fig. 10. *Margarinotus (Ptomister) multidens* (Schmidt). A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Left profemur, dorsal view. G: Female genitalia, spermatheca, vagina and bursa copulatrix, lateral view (left side). H: Spermatheca. [A-F: no. 9915, Liukei; G, H: no. 9919, Nanshanxi].

Margarinotus (Margarinotus) multidens: Kryzhanovskij & Reichardt, 1976, 341, f. 649, 672.
Margarinotus (Ptomister) multidens: Mazur, 1984, 167 [cataloged]; 1997, 94.

Description. Body length, PPL, male, 5.9–7.8 mm, female, 6.8–8.6 mm, PEL, male, 4.95–6.1 mm, female, 5.4–6.7 mm. Width, male, 4.2–5.4 mm, female, 4.7–5.85 mm. Biometric data are given in Table 4. Body oblong-oval, black and shining.

Frontal stria of head (Fig. 10A) deeply impressed, interrupted on each lateral side and at middle, and strongly bent inwards at middle. Disk of head sparsely and finely punctate, the punctures separated by about four times their diameter. Vertex feebly depressed at middle. Labrum quadrate, the anterior margin deeply depressed.

Marginal pronotal stria (Fig. 10B) broadly interrupted behind head, complete laterally, often shortened on basal seventh. Inner lateral pronotal stria nearly complete and strongly crenate, feebly sinuate laterally, sometimes abbreviated on basal seventh, and its apical portion straight. Disk of pronotum sparsely covered with fine punctures, which are separated

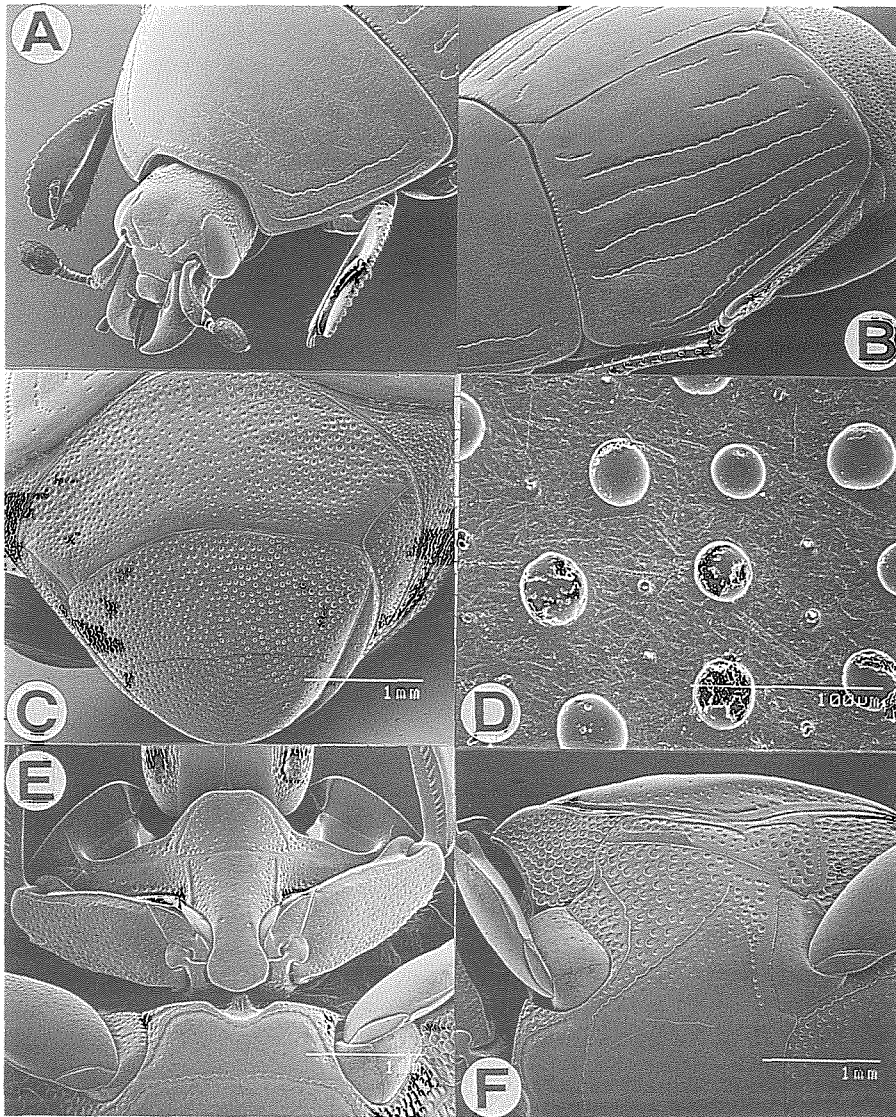


Fig. 11. *Margarinotus (Ptomister) multident* (Schmidt). A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–D: no. 9932, Shizitou, Puli; E–F: no. 9938, Liukuei].

by about four or five times their diameter and become coarser laterally; area between lateral striae with coarse and dense punctures, which are separated by their own diameter to twice the diameter; a longitudinal puncture present in antescutellar area.

Epipleural fossette strongly excavate, and sparsely and coarsely punctate. Marginal elytral stria absent. Marginal epipleural stria complete and well impressed. Elytra (Fig. 10B) with a slightly subapical transverse depression. External subhumeral stria deeply impressed, with coarse punctures and shortened at basal sixth. Internal subhumeral stria

absent. Oblique humeral stria present on basal third. First to 4th dorsal striae complete, 2nd usually shortened at base and 4th at basal fourth; 5th dorsal stria present on apical third and with a short basal rudiment. Sutural stria present on apical half and usually interrupted. All striae, except the oblique humeral, moderately crenate. Disk of elytra sparsely covered with fine punctures, which are separated by three to ten times their diameter, and with subapical depression.

Pygidia (Fig. 11C) finely alutaceous. Propygidium densely and coarsely punctate, the punctures separated by about twice their diameter and becoming sparser medially, with a few minute punctures intermingled among the coarse punctures. Disk of propygidium with a lateral depression behind each posterior angle. Pygidium convex, its punctation similar to propygidial one, but a little denser.

Prosternal lobe (Fig. 11E) broadly truncate anteriorly, its disk coarsely punctate, the punctures becoming coarser laterally; marginal stria of lobe completely and deeply impressed; carinal stria absent; inside area of lateral prosternal stria coarsely punctate.

Anterior margin of mesosternum (Fig. 10C, 11E) deeply emarginate at middle, its marginal stria complete and crenate; disk of mesosternum sparsely and finely punctate, but the lateral third and an area behind each anterolateral angle coarsely punctate; a short stria impressed behind each anterolateral angle. Meso-metasternal suture complete and sparsely

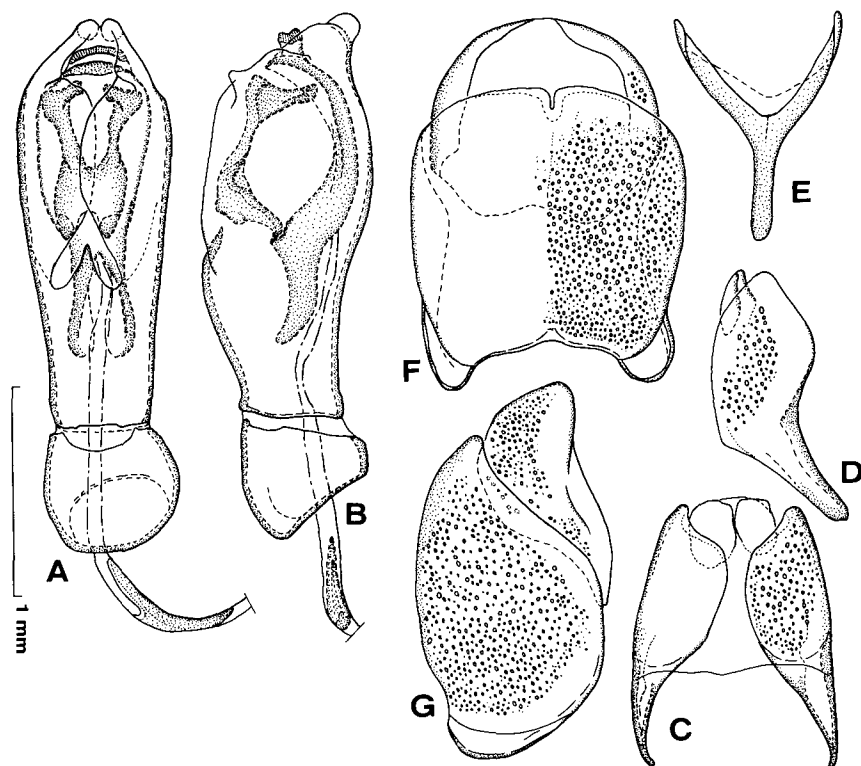


Fig. 12. *Margarinotus (Ptomister) multident* (Schmidt). Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ditto, lateral view. E: Ninth sternum (spicule), dorsal view. F: Eighth tergite and sternum, dorsal view. G: Ditto, lateral view. [no. 9914, Nanshanchi].

crenate, obtusely angulate at middle. Post-metacoxal stria well impressed and regularly arcuate, its ending attached at middle of metasternal-mesepimeral suture. Lateral mesosternal stria (Fig. 11F) deeply impressed, crenate, extending posteriorly and obliquely, and its apical end attaining to the peak of an elevation on lateral area of mesosternum; oblique stria absent. Intercoxal disk of metasternum impunctate, the area along the lateral stria sparsely and finely punctate, sometimes densely covered with ocelloid punctures; lateral disk of metasternum densely covered with ocelloid, shallow and large punctures, intermingled with moderate ones; and without hair.

Intercoxal disk of 1st abdominal sternum coarsely punctate laterally and well striate on each side.

Protibia (Fig. 10E, D) with 20 or 21 small denticles on external margin. Profemur with posterior marginal stria on apical sixth.

Male genitalia as shown in Fig. 12. Aedeagus swollen on apical half; ratio in length of paramera to basal piece 3.55.

Female genitalia as shown in Fig. 10G and H. Spermatheca consisting of 4 small sacs; basal tubular part coiled.

Specimens examined.

[Proper] Taipei Hsien: Chintienkang (1 ex., 27/viii/1994), Y.Y. Lien. Taoyuan Hsien: Paling (1 ex., 11/viii/1989), native collector. Taichung Hsien: Li-xiang (3 exs., 25/viii/1989), native collector. Nantou Hsien: Shiztou, Puli (9 males, 8 females and 1 ex., 31/x/1987), K. Lah; ditto (2 exs., 5/v; 1 ex., 7/v; 1 ex., 5/xi/1989), native collector; Nanshanchi, Puli (13 exs., 12–15/vi/1986; 1 male and 4 females, 12/viii/1989), M. Ôhara; ditto (3 females, 1/viii/1972; 1 female, 3/vi/1975; 5 males and 8 females, 9/vi/1976; 1 ex., no date), K. Masumoto; Sungkang (1 ex., 1/v/1973), S. Tsuyuki; (1 ex., 17/vii/1983), K. Ra; Meiyuan (4 exs., 21/v/1981), Y. Chin-kin. Taichung Hsien: Maliulu (1 male, 28/iv/1986), K. Masumoto. Kaohsiung Hsien: Liukuei (2 exs., 12, 16/ix/1988), W. L. Chen; Tanghsi (1 female, 2/viii/1983), W. L. Chen. ? : Wowanshan (3 exs., 10/x/1990), native collector.

[Continental China] Fukien, Kuantun (alt. 2,300 m), 27, 40n, Br, 117, 40o, L. (1 male, 9/x/1938), J. Klapperich.

Distribution. Taiwan; eastern India; Burma; continental China.

Remarks. This species belongs to the *weymarni*-group (Ôhara, 1989). Kryzhanovskij and Reichardt (1976) and Mazur (1984) noted “Japan” as a habitat of this species, but their reports are erroneous. *M. multidentis* is easily distinguished from all the other members of the tribe Histerini by the number of denticles of the protibia. It usually occurs under carcasses.

Margarinotus (Ptomister) osawai M. Ôhara, n. sp.
(Figs. 13–15)

Type material. Holotype (SEHU). Male. Point-mounted; genitalia dissected; genitalia in balsam on a plastic slide; labeled as follows: 1. “Songkang (alt. 2,000 m), Nantou Hs. (= Hsien), Taiwan, 2 VIII 1992, Chin-Kin Yu leg.”; 2. “M. Ôhara, No-9917”; 3. “Holo-type, *Margarinotus (Ptomister) osawai* M. Ôhara” (red label).

Description. Body length, PPL 6.45 mm, PEL 5.60 mm. Width, 4.55 mm. Biometric data are as follows: PL 2.05, APW 1.75, PPW 4.00, EL 2.90, EW 4.55, ProW 2.80, ProL 1.10, PL 1.25, PTL 1.50, MSTL 1.50, MTTL 2.05. Body oblong-oval, black and shining.

Frontal stria of head (Fig. 13A) complete and well impressed, and bent slightly inwards at middle; disk sparsely and finely punctate, the punctures separated by about four times

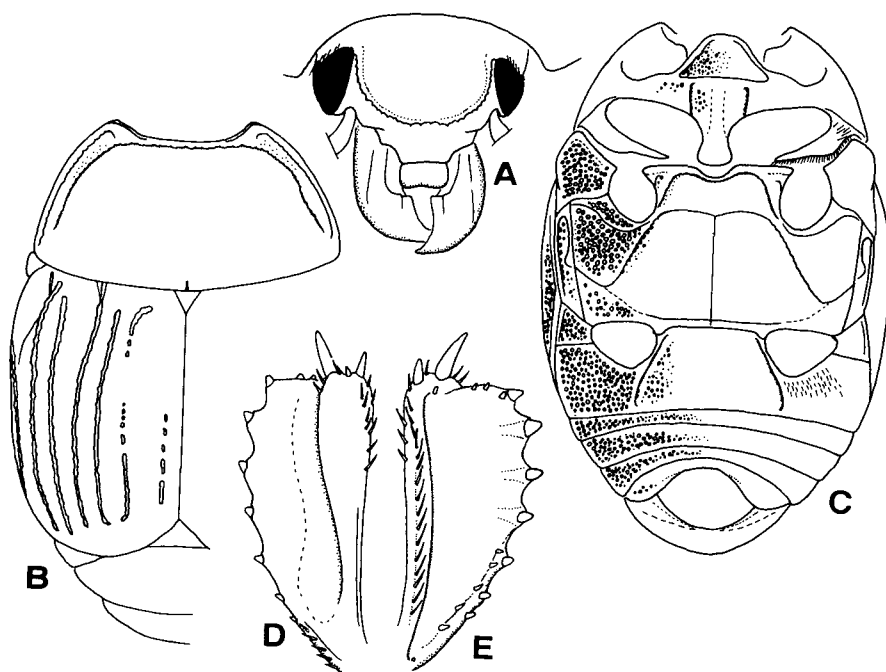


Fig. 13. *Margarinotus (Ptomister) osawai* M. Ôhara, n. sp. A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. [A-E: no. 9917, Holotype, Sungkung].

their diameter.

Marginal pronotal stria (Fig. 13B) complete laterally, and broadly interrupted behind head. Outer lateral stria nearly complete. Inner lateral stria complete and strongly crenate, straight on the apical portion. Disk of pronotum evenly and finely punctate, the punctures separated by two to five times their diameter and becoming coarser between two lateral striae. Antescutellar area with a longitudinal punctures.

Epipleural fossette feebly excavate and densely covered with large punctures. Marginal elytral stria absent. Marginal epipleural stria complete and with large punctures. External subhumeral stria (Fig. 13B) deeply impressed and abbreviated at basal sixth. Internal subhumeral stria absent. Oblique humeral stria present on basal third. First to 4th dorsal striae complete and feebly crenate, but 2nd and 4th striae shortened on apical ninth and eighth, respectively; basal end of 2nd bent slightly outwards. Fifth dorsal stria present on apical third and as a short arc on basal sixth. Sutural stria represented by a line of a few punctures on apical half. Disk of elytra with a subapical depression. Surface of elytra evenly and finely punctate, the punctures becoming coarser on apical band.

Propygidium (Fig. 14C) densely covered with coarse punctures, which are separated by half to three times their diameter, with a few moderately sized punctures intermingled. Pygidium more densely punctate than propygidium, the punctures minute at apex.

Prosternal lobe (Fig. 13C, 14F) round at apex, its marginal stria broadly interrupted at middle. Disk of lobe coarsely punctate, the punctures becoming denser laterally. Prosternal

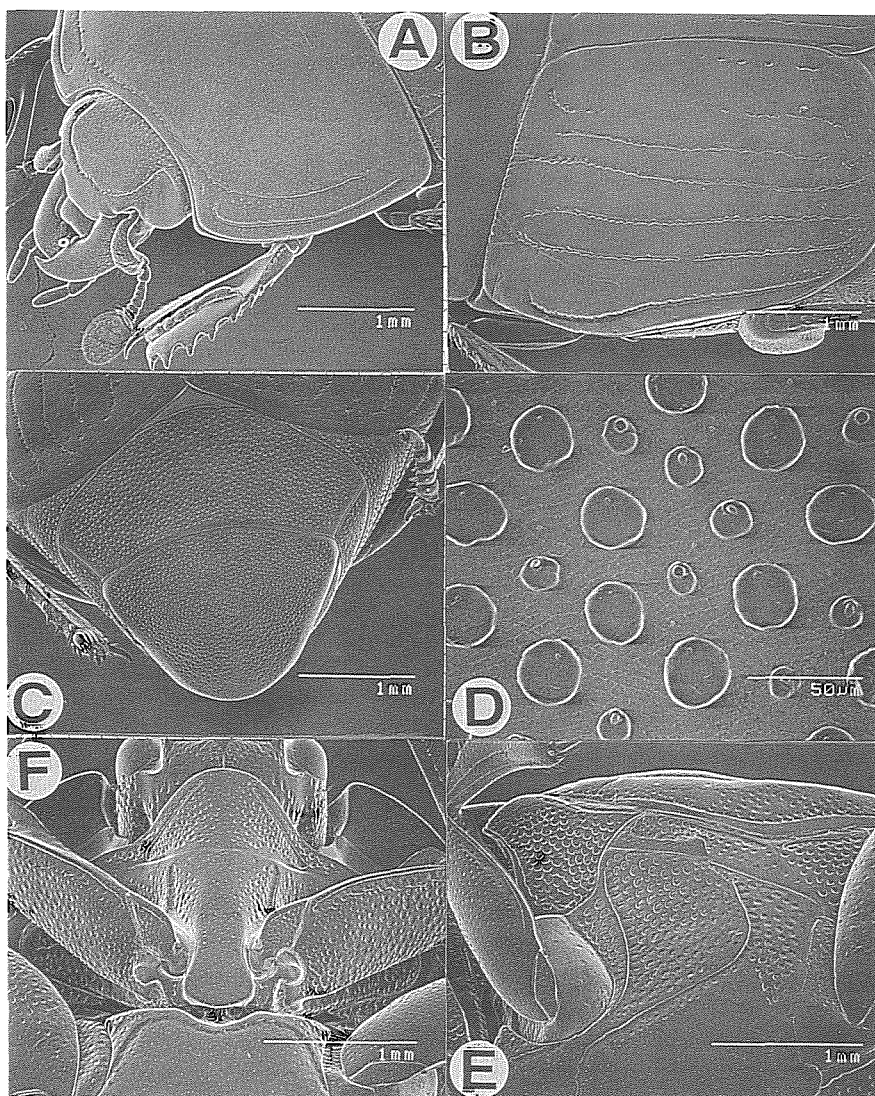


Fig. 14. *Margarinotus (Ptomister) osawai* M. Ôhara, n. sp. A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–F: no. 9917, Holotype, Sungkung].

keel without carinal stria.

Anterior margin of mesosternum (Fig. 14F) emarginate at middle, its marginal stria complete and subcariniform, and another short stria present behind each anterior angle. Disk of mesosternum sparsely covered with fine punctures, which are separated by about five times their diameter. Meso-metasternal suture obtusely angulate at middle. Lateral metasternal stria (Fig. 14E) well impressed and carinate, extending obliquely and posteriorly, and united with the oblique stria that extends inwards from the middle of the metasternal-

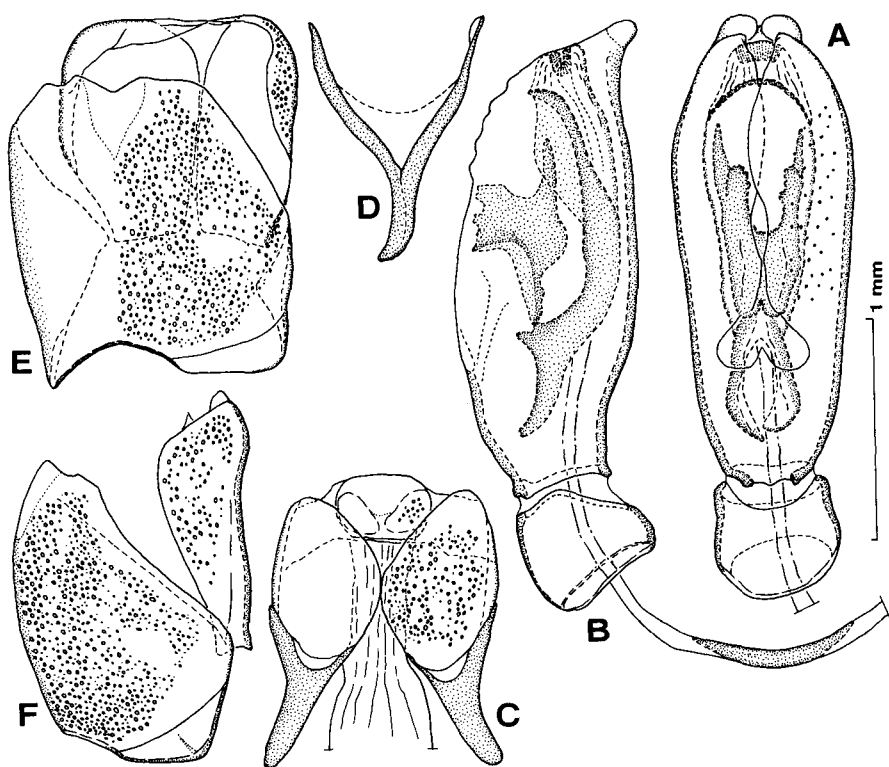


Fig. 15. *Margarinotus (Ptomister) osawai* M. Ôhara, n. sp. Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ninth sternum (spicule), dorsal view. E: Eighth tergite and sternum, dorsal view. F: Ditto, lateral view. [no. 9917, Sungkung].

metepisternal suture. Post-mesocoxal stria extending along the basal margin of mesocoxa and its outer end attaining to middle of metasternal-mesepimeral suture. Intercoxal disk of metasternum sparsely clothed with fine punctures, and feebly depressed along the longitudinal suture. Lateral disk of metasternum densely covered with large and shallow punctures, which are separated by half or one-third of their diameter and become finer posteriorly, intermingled with fine punctures; without hair.

Intercoxal disk of 1st abdominal sternum with sparse fine punctures, which become coarser along the 1st abdominal stria. First abdominal stria complete and deeply impressed.

Protibia (Fig. 13D, E) with 7 denticles on outer lateral margin and 3 small denticles on apical margin. Ventral surface of profemur with posterior marginal stria on apical fourth.

Male genitalia as shown in Fig. 15. Ratio in length of paramera to basal piece of aedeagus 3.87.

Distribution. Taiwan (Highlands).

Remarks. *M. osawai* is close to *M. agnatus* (Lewis). It may be distinguished by the shape of median armature of male genitalia (Fig. 15A, B).

This species is named in honour of Dr. Shozo Osawa, who is one of pioneers in Japanese histeridology.

Margarinotus (Ptomister) babai M. Ôhara, n. sp.
(Figs. 16–18)

Hister boleti: Lewis, 1915, 55 [Shinten].

Hister (Hister) boleti: Miwa, 1931, 56 [Shinten]; Kamiya and Takagi, 1938, 30.

Type material. Holotype (SEHU). Male. Point-mounted; genitalia dissected; genitalia in balsam on a plastic slide; labeled: 1. “Shi Nan Shan, near Liu Kui, S-Taiwan, 15.VII.1986, Col. K. Baba”; 2. “M. Ôhara, no. 9944”; 3. “Holo-type, *Margarinotus (Ptomister) babai* M. Ôhara” (red label). Paratypes. 18 exs. Nantou Hsien: Mt. Holuan (1 female, 29/vii/1983), K. Ra; (2 females, 25/vii/1984), J. Luo; Mufu-zhongxin (1 female, 27/vii/1983), J. Luo; Sungkang, 2,000m (1 male and 4 females, 2/viii/1992), Chin-Kin Yu; Huisun Forest (1 ex., 15/ix/1966), Y.Y. Lien; Suifeng (2 males and 2 females, 13/viii/1992), C.K. Yu. Chiai Hsien: Fenchifu (2 males and 1 female, 30/vii/1981), K. Matsuda. Kaohsiung Hsien: Shyk shan, Near Liukuei (1 female, 28/vi/1986), K. Baba.

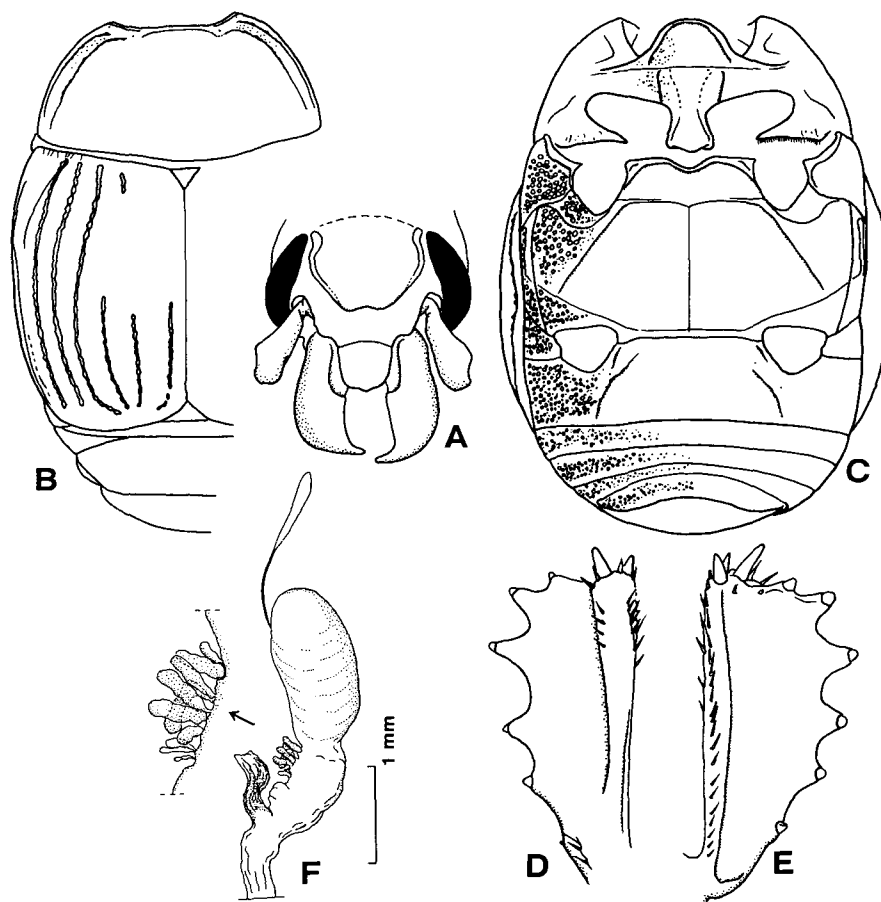


Fig. 16. *Margarinotus (Ptomister) babai* M. Ôhara, n. sp. A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Female genitalia, lateral view (left side). [A, B, D: no. 9937, Sungkang C, E: no. 9939, Sungkang; F: no. 9950, Shyk shan, Liukuei].

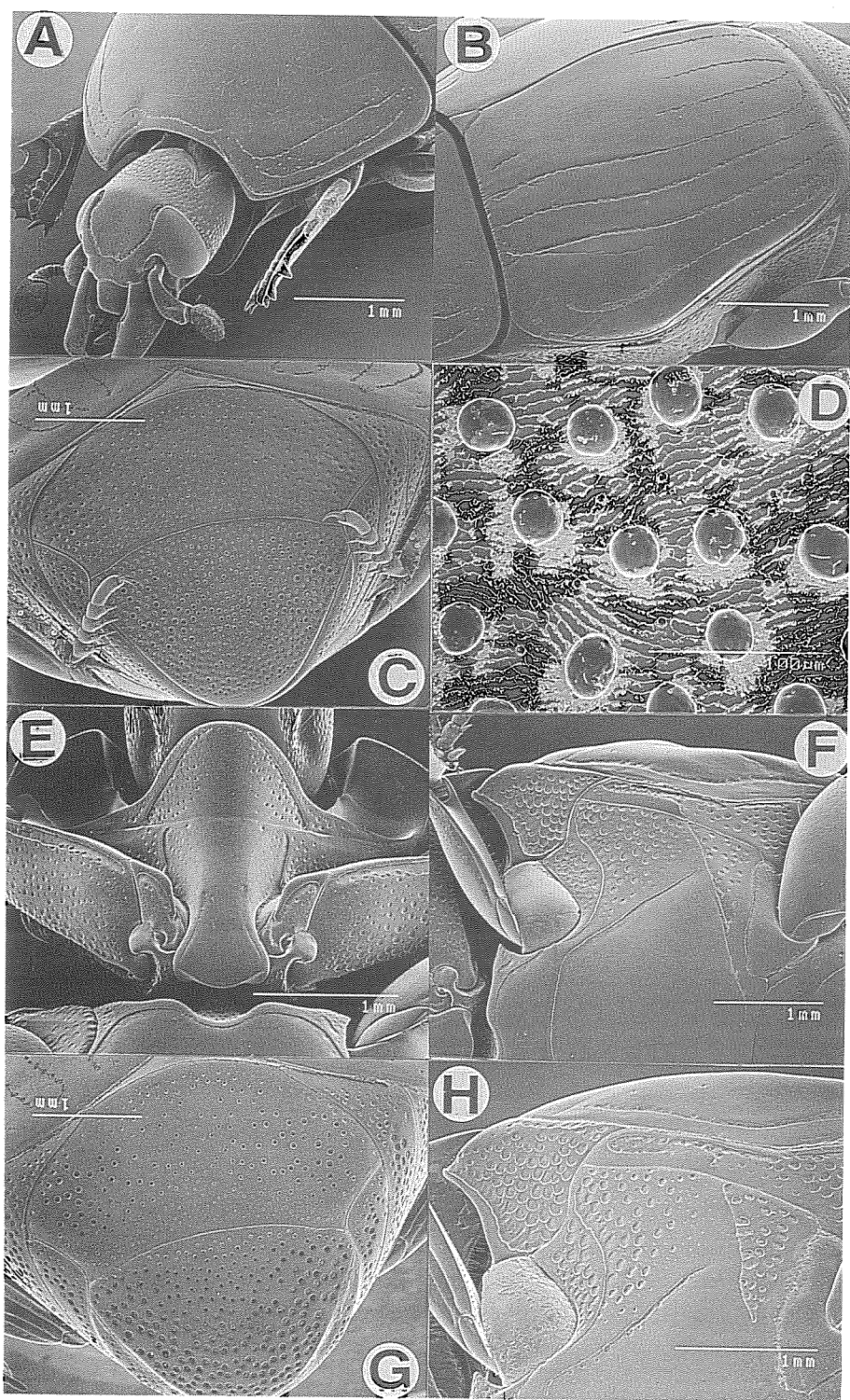


Table 5. Biometric data for *Margarinotus (Ptomister) babai* M. Ôhara, n. sp.

	Male	Female
APW	1.66-1.79 (1.72±0.041) 3	1.70-1.93 (1.79±0.026) 9
PPW	4.00-4.35 (4.12±0.115) 3	4.00-4.45 (4.31±0.045) 9
PL	1.93-2.14 (2.02±0.060) 3	2.00-2.42 (2.27±0.040) 9
EL	3.10-3.11 (3.10±0.017) 3	3.04-3.80 (3.36±0.083) 9
EW	4.80-5.04 (4.84±0.074) 3	4.35-5.31 (5.15±0.053) 9
ProW	2.75-3.11 (2.92±0.103) 3	3.00-3.45 (3.14±0.044) 9
ProL	1.24-1.31 (1.28±0.021) 3	1.24-1.40 (1.34±0.017) 9
PyL	1.31-1.54 (1.43±0.081) 3	1.38-1.72 (1.60±0.038) 9
PTL	1.40-1.54 (1.47±0.056) 3	1.30-1.66 (1.51±0.034) 9
MSTL	1.50-1.54 (1.54±0.027) 3	1.40-1.79 (1.64±0.040) 9
MTTL	1.85-2.00 (1.94±0.040) 3	1.39-2.20 (2.06±0.036) 9

Description. Body length, PPL, male, 6.21–6.90 mm, female, 6.42–7.94 mm, PEL, male, 5.38–5.66 mm, female, 5.66–6.28 mm. Width, male, 4.8–5.04 mm, female, 4.85–5.31 mm. Biometric data are given in Table 5. Body oblong-oval, black and shining.

Frontal stria of head (Fig. 16A) complete, crenate and deeply impressed, its basal end deeply excavate. Disk of head sparsely and finely punctate.

Marginal pronotal stria (Fig. 16B) interrupted behind head and complete laterally. Outer lateral stria complete. Inner lateral stria complete laterally, interrupted behind eyes (sometimes complete anteriorly and strongly bent behind eyes), and the apical portion behind head nearly straight. Disk of pronotum sparsely covered with microscopic punctures, which are coarse between lateral striae. Antescutellar area with a longitudinal puncture.

Epipleural fossette clothed with microscopic punctures. Marginal elytral stria absent. Marginal epipleural stria complete and well impressed. Elytra (Fig. 16B) with a slight subapical impression. External subhumeral and 1st to 3rd dorsal striae complete and strongly crenate. Internal subhumeral stria absent. Oblique humeral stria present on basal third. Fourth dorsal stria present on apical half and with a short basal rudiment. Fifth dorsal stria present on apical third. Sutural stria present on apical half. Disk of elytra evenly clothed with microscopic punctures.

Pygidia (Fig. 17C) finely alutaceous. Propygidium sparsely and coarsely punctate, and its intervals with scattered minute punctures. Punctuation of pygidium dense and coarse, with minute punctures intermingled.

Prosternal lobe rounded at apex, its marginal stria interrupted at middle. Disk of lobe coarsely punctate laterally. Prosternal keel with carinal striae. Anterior margin of mesosternum (Fig. 16C, 17E) strongly emarginate at middle, its marginal stria complete. Disk of mesosternum sparsely with microscopic punctures. Meso-metasternal suture complete, obtusely angulate at middle. Lateral mesosternal stria extending posteriorly, and

Fig. 17 (on page 28). A – F: *Margarinotus (Ptomister) babai* M. Ôhara, n. sp. A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. G – H: *M. (P.) boleti* (Lewis). G: Propygidium and pygidium, caudal view. H: Mesosternum, metasternum and epipleura of elytron, ventral view. [A, B, D: no. 9937, Sungkung; C, E, F: no. 9939, Sungkung; G, H: no. 9942, Odamiyama, Shikoku, Japan].

its basal end attaining to the middle of meso-metasternal suture. Oblique stria extending inwardly from the apical third of the metasternal-metepisternal suture. Intercoxal disk of metasternum sparsely with microscopic punctures. Lateral disk sparsely covered with coarse and shallow punctures, and scattered with fine punctures throughout; without hair.

Intercoxal disk of 1st abdominal sternum sparsely with microscopic punctures, without coarse punctures along abdominal stria, and striate on apical two-thirds on each side.

Protibia (Fig. 16D, E) with 5 denticles on outer margin and 1 denticle on apical margin. Profemur with posterior marginal stria on apical fifth.

Male genitalia as shown in Fig. 18.

Female genitalia as shown in Fig. 16F. Spermatheca consisting of 10 small sacs.

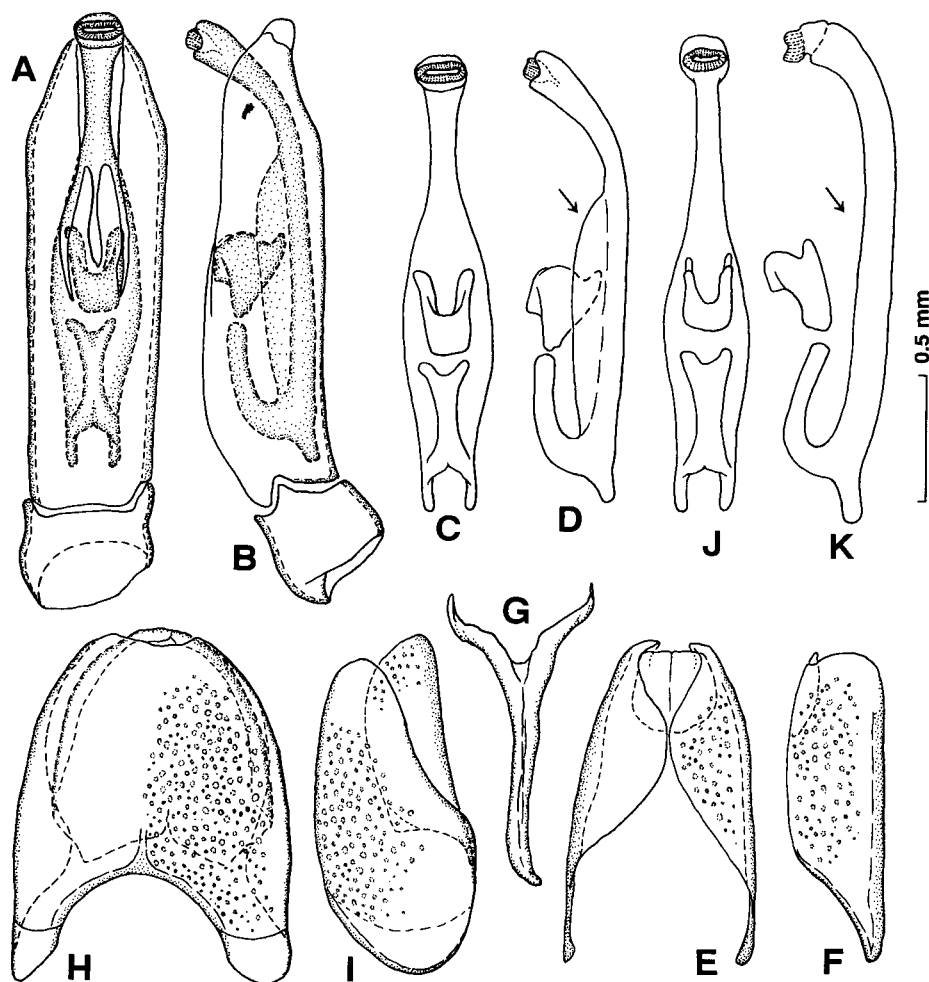


Fig. 18. A–I: *Margarinotus (Ptomister) babai* M. Ôhara, n. sp. Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Median lobe, dorsal view. D: Ditto, lateral view. E: Ninth and 10th tergites, dorsal view. F: Ditto, lateral view. G: Ninth sternum (spicule), dorsal view. H: Eighth tergite and sternum, dorsal view. I: Ditto, lateral view. J–K: *M. (P.) boleti* (Lewis). J: Median lobe, dorsal view. K: Ditto, lateral view. [A–D: no. 9937, Sungkung; E–I: no. 9944, Shi Nan Shan, near Liukuei; J, K: no. 9943, Kurino, Kagoshima, Japan].

Distribution. Taiwan.

Remarks. This new species was referred to *M. (P.) boleti* by Lewis (1915), but it is distinguished from *M. boleti* by the following characters: the denser punctation of the propygidium and pygidium, the inner lateral pronotal stria usually interrupted behind eyes, the absence of coarse punctures of the intercoxal disk of 1st abdominal sternum, and slight differences in the structure of male genitalia (Fig. 18).

This species is named after the late Dr. Kintaro Baba, who is collector of the holotype, in recognition of his great contribution to the natural history of Coleoptera in Japan and Taiwan.

GENUS *ATHOLUS* THOMSON, 1859

Atholus: Ôhara, 1992c, 167–182; 1993, 135–150.

The genus *Atholus* has been represented by 73 species, known from the Holarctic, Ethiopian and Oriental Regions and Mexican Subregion. In this study, I recognize five species of the genus from Taiwan; although all of them are known, *A. philippinensis* has not been redescribed in detail. Herein *A. philippinensis* is redescribed, and illustrated for several taxonomic features.

Key to the Taiwanese species of the genus *Atholus*

- 1 (2) Lateral prosternal stria present on apical half. Apical end of 3rd elytral dorsal stria strongly bent inwards. *A. coelestis* (Marseul, 1857)
- 2 (1) Lateral prosternal stria nearly entire. Third elytral dorsal stria normal.
- 3 (6) Fifth dorsal and sutural elytral striae present on apical half.
- 4 (5) Fourth elytral dorsal stria nearly complete. External subhumeral stria short and present medio-basally. Pygidium finely punctate. Denticles on apical angle of protibia appressed together. *A. pirithous* (Marseul, 1873)
- 5 (4) Fourth elytral dorsal stria present on apical half. External subhumeral stria long and shortly abbreviated on apical fourth. Pygidium coarsely punctate. Denticles on apical angle of protibia sparsely present. *A. philippinensis* (Marseul, 1854)
- 6 (3) Fifth elytral dorsal stria nearly complete or present at least on apical half. Sutural elytral stria present on apical two-third or complete.
- 7 (8) Lateral disk of metasternum with long hairs. Anterior margin of prosternal lobe narrowly truncate medially. Punctuation of propygidium even.
..... *A. depistor* (Marseul, 1873)
- 8 (7) Lateral disk of metasternum without hair. Anterior margin of prosternal lobe round. Punctuation of propygidium becoming coarser basally.
..... *A. duodecimstriatus quatuordecimstriatus* (Gyllenhal, 1808)

Atholus coelestis (Marseul, 1857)

Hister (Atholus) coelestis: Miwa, 1931, 57 [Kôshun]; Kamiya and Takagi, 1938, 31.

Atholus coelestis: Lewis, 1915, 55; Ôhara, 1992c, 173; 1994, 137.

Specimens examined.

[Proper] Taipei Hsien: Taipei City (9 exs., 14/x/1976), M. Kiuchi. Nantou Hsien: Nanshanchi, Puli (1 ex., 28/xii/1974), K. Masumoto; (1 ex., 30/iii/1977), W. Suzuki; (1 ex., 13/iv/1986), M. Ôhara;

Puli (1 ex., 8/x/1976), M. Kiuchi; Lushan (1 ex., 8/vi/1976), K. Tazoe; Chitou (2 exs., 5/viii/1977), native collector. Chia Hsien: Chuchi (1 ex., 6/xi/1976), M. Kiuchi. Tainan Hsien: Koupi, Hsinhua (2 exs., 8/xi/1976), M. Kiuchi. Hualien Hsien: Jui-sui (1 ex., 15/xi/1976), M. Kiuchi. Kaoshiung Hsien: Liukuei (4 exs., 30/iv; 17 exs., 1/v; 14 exs., 3–7/v/1986), M. Ôhara. Pingtung Hsien: Sizhongchi (8 exs., 11/v; 86 exs., 11/v/1986), M. Ôhara; Kenting (2 exs., 3/xi; 1 ex., 9/xi/1986; 2 exs., 5/v/1987), H. Tanaka; (14 exs., 8/v/1986), M. Ôhara; (2 exs., 4/iv/1976), K. Tazoe; (3 exs., 5/xi/1986), K. Baba; Kenting Natural Park (10 exs., 26/xi/1990), S. Osawa; Lungluntan, Kenting Natural Park (1 ex., 6/ii/1995), Y.Y. Lien; Henchun (3 exs., 10/v/1986), M. Ôhara.

[Lanyu Is.] (3 exs., 9/iv/1978), K. Murakami; (1 ex., 17/iv; 25 exs., 18–22/iv/1986), M. Ôhara.

[Lutao Is.] (21 exs., 26–28/iv/1986), M. Ôhara.

Distribution. Taiwan (proper, Lanyu Is., Lutao Is.); Japan; continental China; India; Nepal; Sri Lanka; Indonesia (Java, Celebes); Tadzhikistan.

Remarks. *A. coelestis* commonly occurs in fresh cow dung in Taiwan.

Atholus depistor (Marseul, 1873)

Peranus depistor: Lewis, 1915, 55 [Horisha].

Hister (Peranus) depistor: Miwa, 1931, 57 [Horisha]; Kamiya and Takagi, 1938, 31.

Atholus depistor: Ôhara, 1992, 176 [Taiwan: Kenting Park].

Specimens examined.

[Proper] Nantou Hsien: Nanshanchi, Puli (3 exs., 13/iv/1986), M. Ôhara; Puli (1 ex., 8/x/1976), M. Kiuchi; Chitou (4 exs., 5/viii/1977), native collector. Hualien Hsien: Jui-sui (1 ex., 15/xi/1976), M. Kiuchi. Pingtung Hsien: Kenting park (1 ex., 11/xi/1976) M. Kiuchi; (1 ex., 4/iv/1976), K. Tazoe. ?: Taiwan Botanical Garden (2 exs., 2/viii/1968), T. Kosaka.

Distribution. Taiwan; Japan; Korea; South-eastern China; Primorskij Kray; Siberia.

Atholus duodecimstriatus quatuordecimstriatus (Gyllenhal, 1808)

Hister (Atholus) duodecimstriatus: Miwa, 1931, 57 [Taipei]; Kamiya and Takagi, 1938, 31.

Atholus duodecimstriatus quatuordecimstriatus: Lewis, 1915, 55 [Taipin]; Ôhara, 1993, 135; 1994, 137.

Specimens examined.

[Proper] Nantou Hsien: Yu Shin (alt. 1,900 m) (1 female, 4/vii/1986), K. Baba.

Distribution. Taiwan; Japan; Vietnam; continental China; Korea; Oman; Nepal; Primorskij and Ussuriyskij Kray.

Remarks. In the Taiwanese material, the 5th dorsal elytral stria is present on the apical half and the sutural stria on the apical two-thirds.

Atholus philippinensis (Marseul, 1854) (Figs. 19–21)

Hister philippinensis Marseul, 1854, 547.

Hister philippensis (sic): Gemminger et Harold, 1868, 771.

Hister (Atholus) philippinensis: Bickhardt, 1913, 173 [Hoozan, Taihorin]; Miwa, 1931, 57 [Hoozan, Taihorin]; Kamiya and Takagi, 1938, 31.

Hister sectator Lewis, 1901, 375, synonymized by Bickhardt, 1917, 194.

Atholus sectator: Lewis, 1906, 402.

Atholus philippinensis: Lewis, 1906, 402; 1915, 55.

Description on the basis of the Taiwanese material. Female. Biometric data as follows (in mm): PPL 4.65, PEL 4.3, APW 1.4, PPW 3.0, PL 1.5, EL 2.0, EW 3.35, ProW 2.0, ProL 0.7, PyL 0.9, PTL 0.95, MSTL 0.85, MTTL 1.1. Body oval, feebly depressed, black and shining; tibiae, tarsi, antennae and mouth parts dark brown.

Frontal stria of head (Fig. 19A) round, complete and deeply impressed. Disk impunctate, wholly clothed with coriaceous microsculpture. Labrum transversely oblong.

Pronotal sides arcuate and strongly convergent apically. Apical angle acute. Marginal stria laterally complete and broadly interrupted behind head. Lateral pronotal stria (Fig. 19B) deeply impressed, sparsely crenate and complete, the lateral portion rather distant from the margin and its basal end reaching to basal fourth of pronotal length. Disk of pronotum without punctation, wholly clothed with coriaceous microsculpture; the narrow

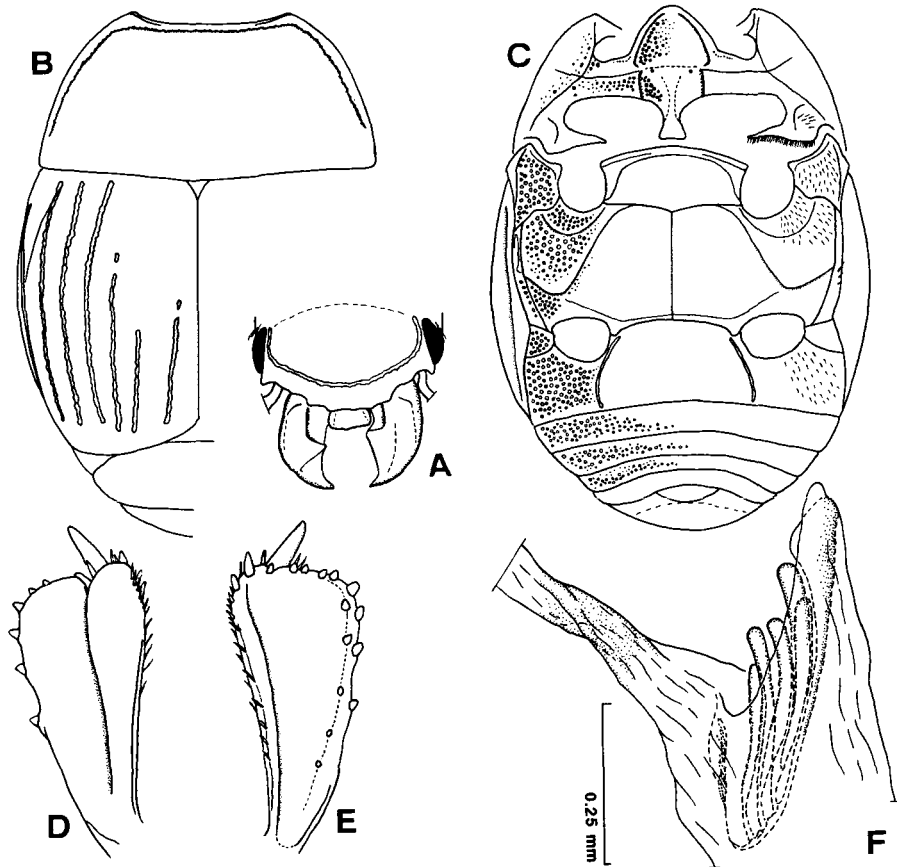


Fig. 19. *Atholus philippinensis* (Marseul). A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. F: Female genitalia, spermatheca, vagina and bursa copulatrix, lateral view (left side). [no. 9930, Nanshanchi].

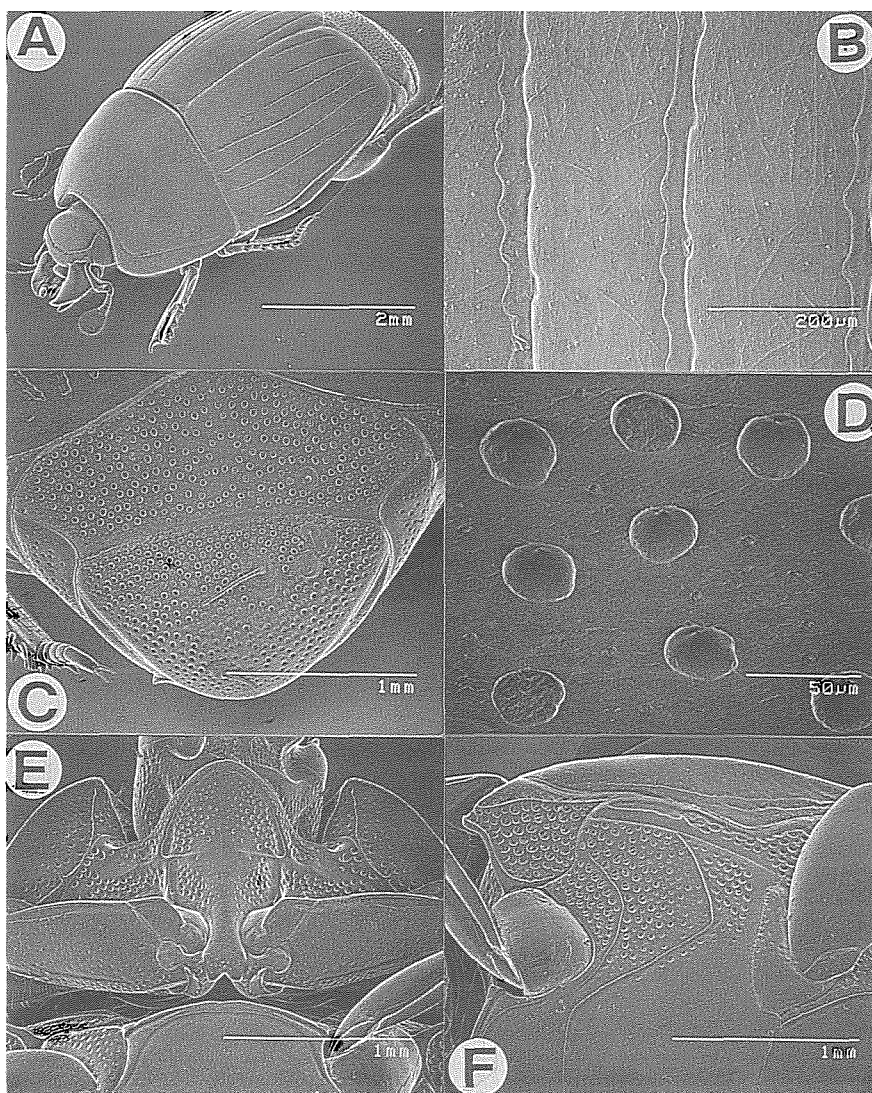


Fig. 20. *Atholus philippinensis* (Marseul). A: Adult, female, oblique view. B: Surface of elytron, dorsal view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–F: no. 9930, Nanshanchi].

posterior band represented by coarse punctures. Antiscutellar area with a short longitudinal puncture.

Marginal epipleural stria present on apical half. Elytral marginal stria complete and carinate. External subhumeral stria (Fig. 19B) abbreviated on basal one-eighth and apical one-sixth. Internal subhumeral stria absent. Oblique humeral stria lightly impressed on basal third. First to 3rd dorsal striae complete, and densely and coarsely crenate. Fourth dorsal stria present on apical half. Fifth and sutural striae present on apical third. Disk

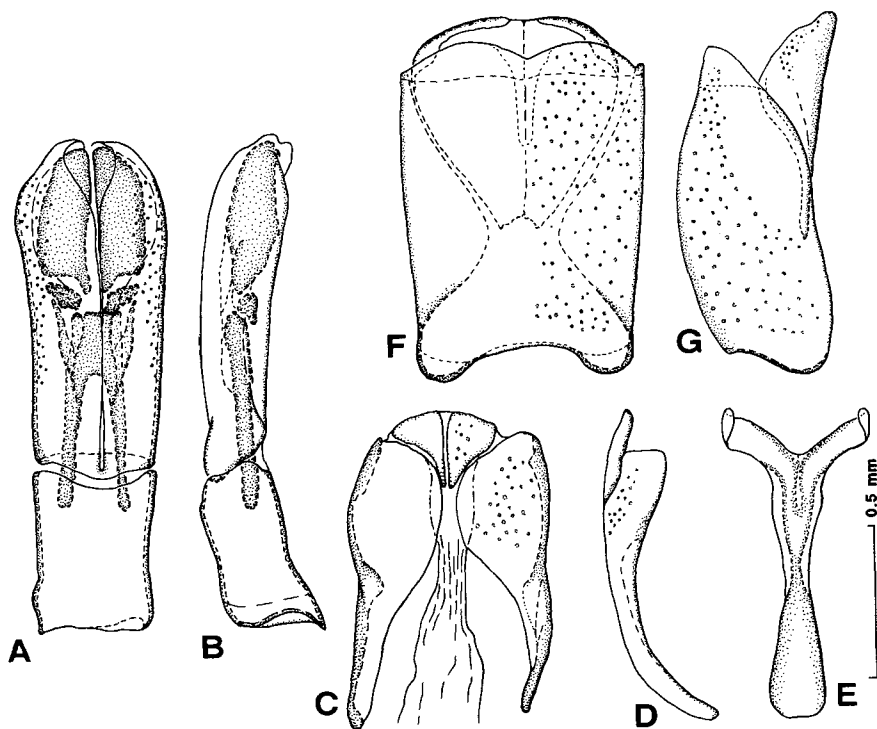


Fig. 21. *Atholus philippinensis* (Marseul). Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ditto, lateral view. E: Ninth sternum (spicule), dorsal view. F: Eighth tergite and sternum, dorsal view. G: Ditto, lateral view. [no. 9908, western Kalimantan, Indonesia].

evenly and sparsely covered with fine punctures, which are separated by about four times their diameter; the mediobasal area clothed with coriaceous ground sculpture.

Propygidium (Fig. 20C) densely covered with large, round and shallow punctures, which are separated by one to three times their diameter; interspace among the large punctures irregularly and sparsely covered with fine punctures, which are separated by two to five times their diameter. Pygidium densely and coarsely punctate, the punctures separated by about their own diameter to half the diameter and becoming sparser apically; interspace among the coarse punctures densely clothed with fine punctures. Propygidium and pygidium with alutaceous ground sculpture.

Anterior margin of prosternal lobe (Fig. 20E) round; marginal stria deeply impressed, carinate and shortly interrupted at middle; disk coarsely punctate, the punctures separated by one to three times their diameter. Prosternal keel narrow, the anterior half descending; carinal stria absent; lateral disk coarsely punctate. Lateral prosternal stria deeply impressed, carinate and complete.

Anterior margin of mesosternum (Fig. 20E) outwardly arcuate; marginal stria clearly impressed and complete; another stria present behind each anterolateral angle; disk sparsely covered with fine punctures. Meso-metasternal suture complete, angulate at middle. Lateral stria of metasternum (Fig. 20F) deeply impressed, carinate, extending obliquely and posteriorly, beginning from lateral fourth of meso-metasternal suture, and united with the

oblique stria that extends inwardly from the middle of metasterno-metepisternal suture; post-mesocoxal stria extending posteriorly and strongly curved along the posterior margin of mesocoxa, and attaining to the middle of metasterno-mesepimeral suture; punctation of intercoxal disk of metasternum similar to that of mesosternum; lateral disk of metasternum densely covered with large and round punctures, which are separated by about half their diameter and become smaller inwardly, and interspace among the large punctures with alutaceous ground sculpture.

Punctation of intercoxal disk of 1st abdominal sternum similar to that of metasternum; lateral stria complete.

Protibia (Fig. 19D, E) with 4 denticles on outer margin and 5 small denticles on apical margin; ventral surface with 5 small denticles along outer margin. Profemoral stria deeply impressed and complete.

Male genitalia as shown in Fig. 21 on the basis of the specimen from western Kalimantan, Indonesia.

Female genitalia as shown in Fig. 19F.
Specimens examined.

[Proper] Nantou Hsien: Nanshanchi, Puli (1 female, 3/iv/1986), M. Ôhara.

Indonesia. [Kalimantan] Mt. Bawan, alt. 250–300 m, western Kalimantan, (1 male, x/1990), native collector.

Distribution. Taiwan; Philippines; Malaysia; Burma; Vietnam; Borneo; Java; Sumatra; India; southern China.

Atholus pirthous (Marseul, 1873)

Hister (Atholus) pirthous: Bickhardt, 1913, 173 [Taihorin, Hoozan]; Miwa, 1931, 58 [Taihorin, Hoozan]; Kamiya and Takagi, 1938, 31.

Atholus pirthous: Lewis, 1915, 55 [Shinten]; Ôhara, 1993, 141; 1994, 138.

Specimens examined.

[Proper] Taipei Hsien: Taipei City (1 ex., 14/x/1976), M. Kiuchi. Taoyuan Hsien: Palin (7 exs., 26/iii/1986), M. Ôhara. Taichung Hsien: Kukuan (1 ex., 4/x/1990), native collector; Lishan (20 exs., 29/iii/1986), M. Ôhara; Mei Fon, alt. 2,350 m, near Ho Huan Shan (4 exs., 10/vi/1987), K. Baba. Nantou Hsien: Shiztoui, Puli (1 ex., 31/x/1987), K. Lah; Nanshanchi (1 ex., 2/x/1984), S. Osawa; (1 ex., viii/1972; 2 exs., 10/vi/1973), K. Masumoto; Wushe (2 exs., 20/xi/1976), M. Kiuchi; Sungkang, alt. 2,000 m (19 exs., 2/iv; 42 exs., 14/iv/1986), M. Ôhara; (1 ex., 20/vi/1983), K. Lah; (1 ex., 28/vii/1990), native collector; Chin chin farm, Sungkang, (1 ex., 22/ix/1987), H. Tanaka; Chitou (5 exs., 5/viii/1977), native collector; Yuhshin-Ran. (4 exs., 22/ix/1987), H. Tanaka; Mufu-zhongxin (20 exs., 27/vii/1983), J.-J. Luo. Kaoshiung Hsien: Liukuei (2 exs., 1/v/1986), M. Ôhara; Near Liukuei (2 exs., 20/ii/1989), W. Chen & S. Osawa. Pingtung Hsien: Kenting (1 ex., 4/iv/1976), K. Tazoe; (1 ex., 20/v/1973), K. Masumoto; Kenting Park (1 ex., 11/xi/1976), M. Kiuchi; Sizhongchi (1 ex., 11/v/1986), M. Ôhara. Hualien Hsien: Taroko (2 exs., 20/x/1976; 1 ex., 17/xi/1976), M. Kiuchi.

[Lanyu Is.] (2 exs., 3/iv/1987), K. Baba.

Distribution. Taiwan (proper, Lanyu Is.); Japan; northern and high elevation central Europe; Siberia; Mongolia; continental China.

Remarks. This species usually occurs in fresh cow dung and decaying vegetable matter.

GENUS ASIASTER COOMAN, 1948

Asiaster Cooman, 1948, 123 [Type species: *Asiaster calcator* Cooman, 1948].

The genus *Asiaster* Cooman consists of three species; *A. calcator* Cooman, 1948, *A. pilisternus* Cooman, 1948 and *A. vestitus* (Lewis, 1891). The genus differs from the other genera of the tribe Histerinae by the presence of hairs on the intercoxal disks of the pro-, meso- and metasterna and the structure of protibia with many denticles on the ventral surface. *Asiaster* may be allied to the genus *Atholus* on the basis of similarity in the structure of mesosternum, as Cooman (1948) already mentioned. The distribution area of these species are restricted to Southeast Asia. *A. calcator* has been the only known species of the genus from Taiwan. In this study, *A. calcator* is redescribed and its important features are illustrated; especially its genitalia are figured for the first time.

Asiaster calcator Cooman, 1948 (Figs. 22–25)

Asiaster calcator Cooman, 1948, 124 [Taiwan: Sozan (Holotype), Shinchiku (Paratype)]; Mazur, 1997, 134 [cataloged].

Redescription. Biometric data as follows (in mm): PPL 4.1, PEL 3.5, APW 1.2, PPW 2.7, PL 1.3, EL 1.85, EW 3.0, ProW 1.7, ProL 0.8, PyL 0.75, PTL 0.95, MSTL 0.9, MTTL 1.4. Body oblong-oval, feebly depressed, black and shining; antennae, mouth parts, tibiae, tarsi and transverse apical band of elytra reddish brown.

Frontal stria of head complete and deeply impressed, regularly arcuate on anterior portion. Disk evenly covered with punctures, which are separated by their own diameter. Labrum transversely oblong.

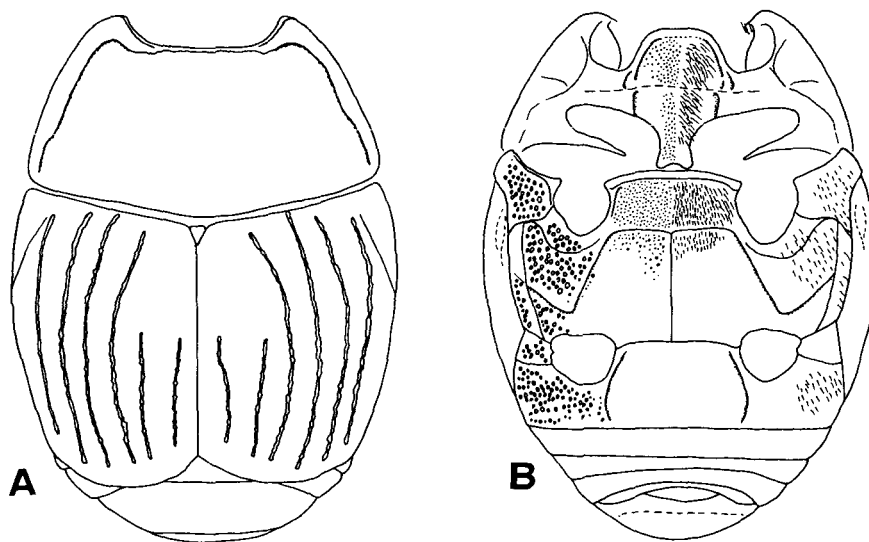


Fig. 22. *Asiaster calcator* Cooman. A: Pronotum and elytra. B: Ventral side of adult. [no. 9612, Chitou].

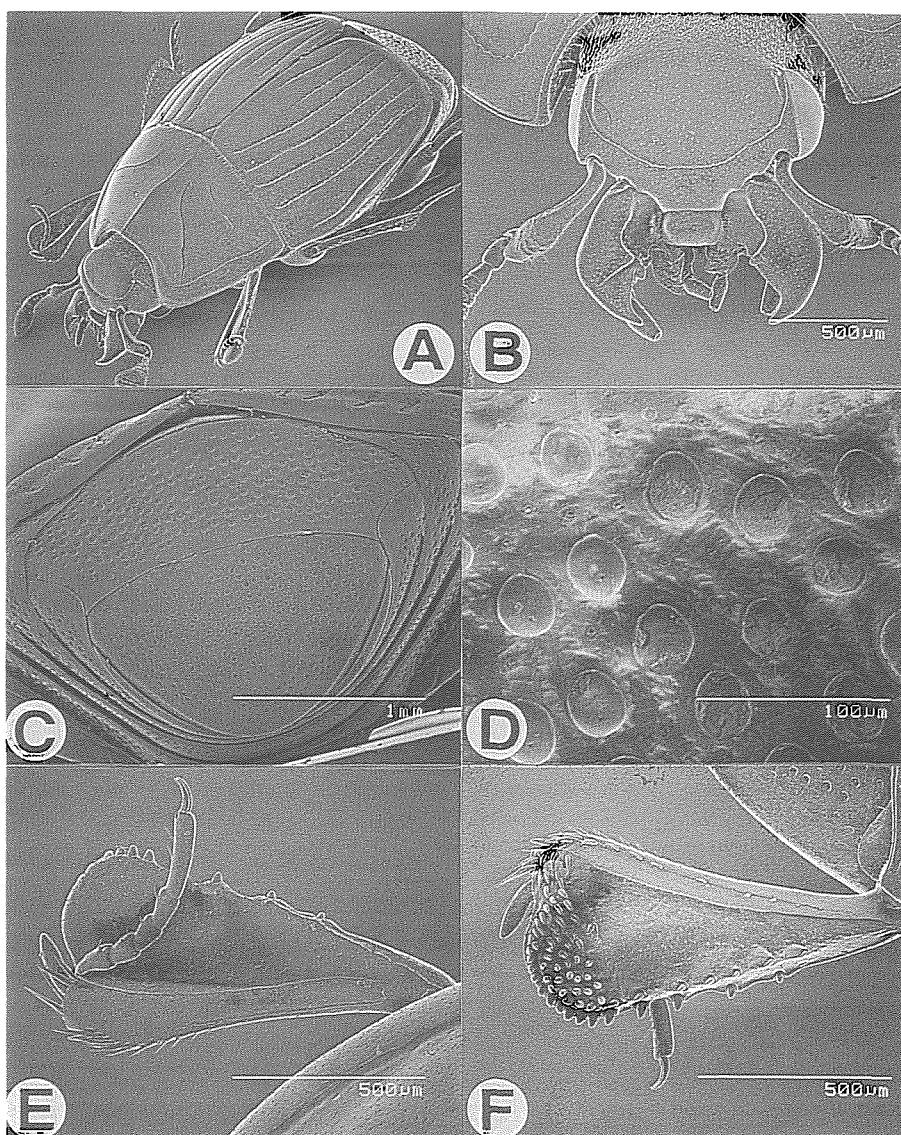


Fig. 23. *Asiaster calcator* Cooman. A: Adult, oblique view. B: Head, frontal view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Right protibia, dorsal view. F: Ditto, ventral view. [no. 9612, Chitou].

Marginal pronotal stria interrupted behind head, complete laterally. Inner lateral pronotal stria complete, straight on anterior portion and sinuate at laterobasal third. Disk of pronotum evenly covered with moderate-sized and fine punctures, the moderate-sized ones being separated by about four times their diameter; band along posterior margin coarsely punctate; a short longitudinal impression present in antescutellar area.

Epipleural fossette not excavate. Marginal elytral stria shortened on basal fourth. Marginal epipleural stria complete, carinate and sparsely crenate. External subhumeral

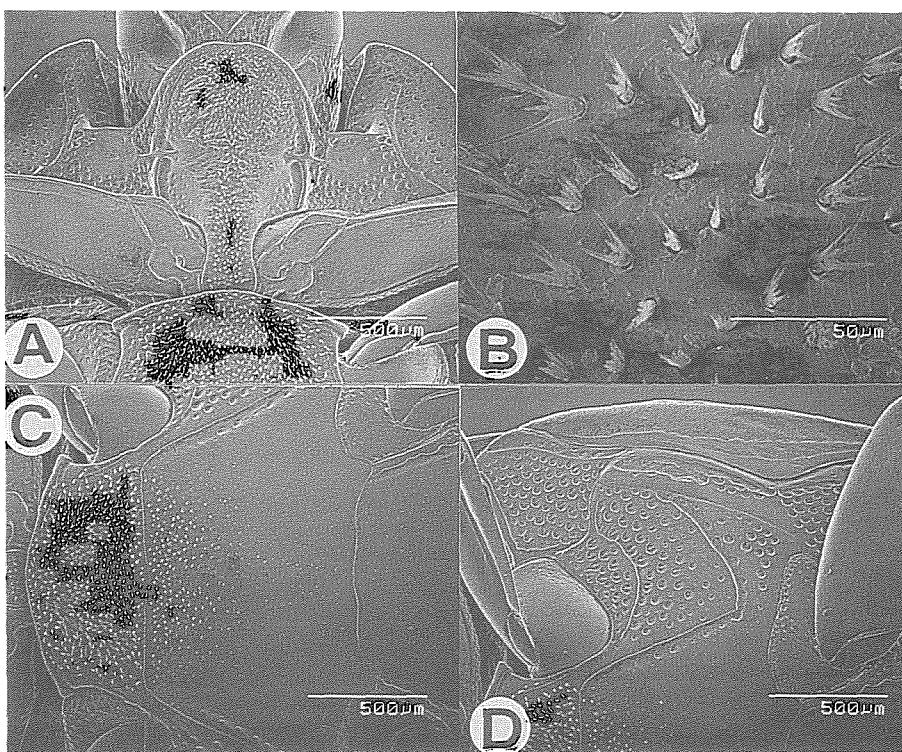


Fig. 24. *Asiaster calcator* Cooman. A: Prosternum and mesosternum, ventral view. B: Hairs on prosternal process. C: Intercoxal disk between meso- and metasterna, ventral view. D: Mesosternum, metasternum and epipleura of elytron, ventral view. [no. 9612, Chitou].

stria deeply impressed medially, shortened on basal ninth and apical third. Internal subhumeral stria represented on apical half by a row of coarse and sparse punctures. Oblique humeral stria weakly impressed on basal fourth. First to 4th dorsal striae deeply impressed, complete and crenate; 4th strongly arcuate outwardly. Fifth and sutural striae present on apical half, the sutural inwardly sinuate basally. Surface of elytra evenly covered with moderate sized punctures, which are separated by four to ten times their diameter.

Propygidium irregularly covered with coarse and ocelloid punctures, which are separated by half to three times their diameter; interspace among the coarse punctures sparsely intermingled with fine punctures; disk clothed with strigose ground microsculpture. Pygidium convex medially; punctation similar to that of propygidium, but the punctures much denser and becoming sparser and finer apically.

Prosternal lobe truncate apically, its disk densely covered with coarse punctures, the punctures becoming sparser laterally and furnished with hairs on median area (Fig. 24B), the hairs ramose; marginal stria of lobe interrupted antero-medially and deeply impressed laterally. Prosternal keel flat on the top, the posterior margin angulate inwardly; disk densely and coarsely punctate, the punctures furnished with long hairs; lateral area sparsely and coarsely punctate. Lateral prosternal stria complete, strongly carinate.

Anterior margin of mesosternum (Fig. 24C) outwardly arcuate; marginal stria feebly impressed anteriorly and laterally; disk densely covered with coarse punctures, which are

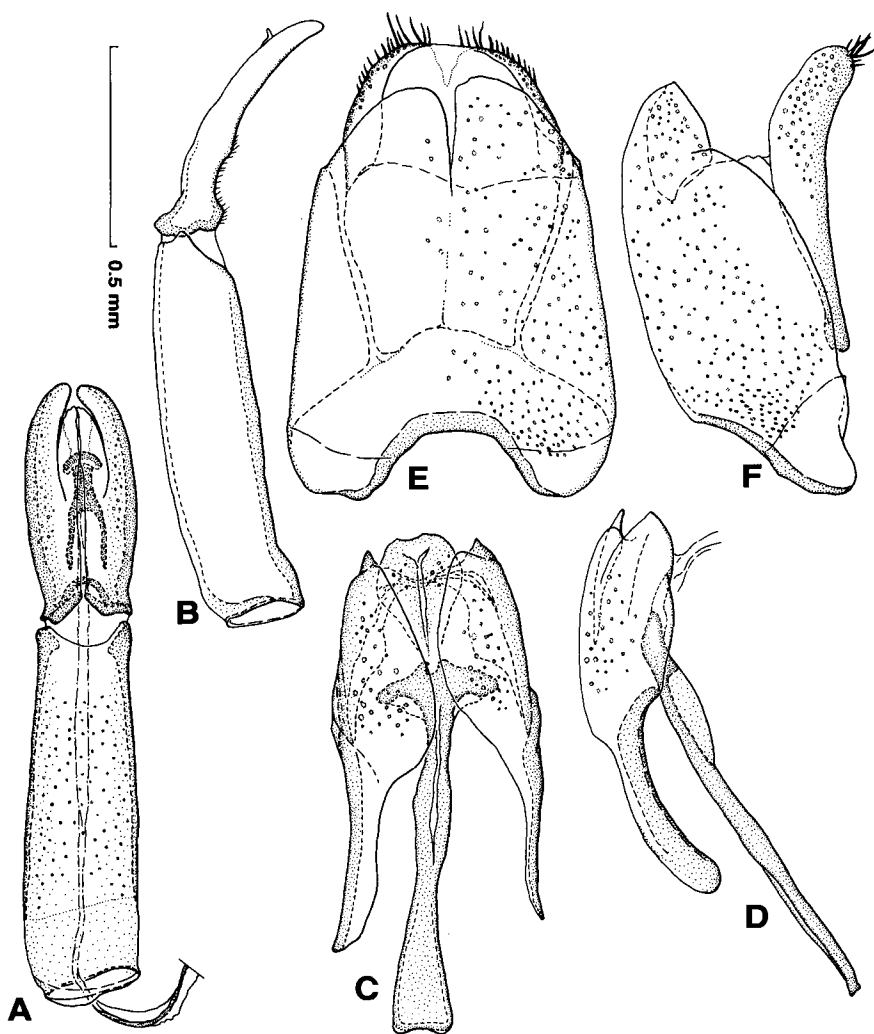


Fig. 25. *Asiaster calcator* Cooman. Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites and 9th sternum (spicule), dorsal view. D: Ditto, lateral view. E: Eighth tergite and sternum, dorsal view. F: Ditto, lateral view. [no. 9612, Chitou].

separated by about their own diameter; with yellow hairs. Meso-metasternal suture complete. Lateral stria of metasternum (Fig. 24D) strongly carinate, complete, extending obliquely and posteriorly and united with the oblique stria that extends inwardly from the middle of metasterno-metepisternal suture; post-mesocoxal stria extending laterally and strongly curved anteriorly along the posterior margin of mesocoxa, and attaining to the inner third of metasterno-mesepimeral suture; intercoxal disk depressed and densely and coarsely punctate on basal third, the punctures furnished with rather short hairs and becoming sparser posteriorly and laterally; apical half of the intercoxal disk sparsely covered with fine punctures, which are separated by about five to ten times their diameter; lateral disk densely covered with large punctures, which are separated by one-third to half their diameter and

become finer medioapically.

Intercoxal disk of first abdominal sternum completely striate laterally.

Protibia (Fig. 23E, F) with about 18 denticles on outer margin, the apical 14 small and densely set on anterolateral corner; about 30 small denticles present on apical fourth of ventral surface. Profemoral stria complete, straight and feebly carinate. Mesotibia with about 16 spines on outer margin and many spines present on apical corner.

Male genitalia as shown in Fig. 25. Basal piece long; ratio of parameres length to basal length about 0.65.

Specimens examined.

[Proper] Taichung Hsien: Chitou (1 male, 5/viii/1977), native collector.

Distribution. Taiwan.

GENUS PACHYLISTER LEWIS, 1904

The Taiwanese *Pachylister* has been represented by three species, *chinensis*, *lutarius* and *orientalis*, but the latter two species were recorded by Lewis (1995) on the basis of Shiraki's collection. Accordingly, the Lewis records are doubtful still now (Kurosawa, 1980). I recognize only one species, *P. chinensis*. Ôhara (1999) gave a detailed redescription of *P. chinensis*. Herein I add some taxonomic notes with illustrations of female genitalia and SEM photos of several features.

Key to the Taiwanese species of the genus *Pachylister*

- | | | | |
|---|-----|--|---|
| 1 | (4) | Meso- and metatibiae not impressed, becoming wider apically. | Subgenus <i>Pachylister</i> Lewis, 1904 |
| | | Pronotal lateral stria interrupted behind head. | |
| 2 | (3) | Body smaller, length 8–10 mm. Margin of pygidium carinate. | <i>P. chinensis</i> (Quensel, 1806) |
| 3 | (2) | Body larger, length 14–12 mm. Margin of pygidium not carinate. | <i>P. lutarius</i> (Erichson, 1834) |
| 4 | (1) | Meso- and metatibiae strongly impressed, flattened and widened. | Subgenus <i>Santalus</i> Lewis, 1906 |
| | | Body length about 7 mm. Pronotal lateral stria complete. | |
| | | <i>P. orientalis</i> (Paykull, 1811) | |

SUBGENUS PACHYLISTER LEWIS, 1904

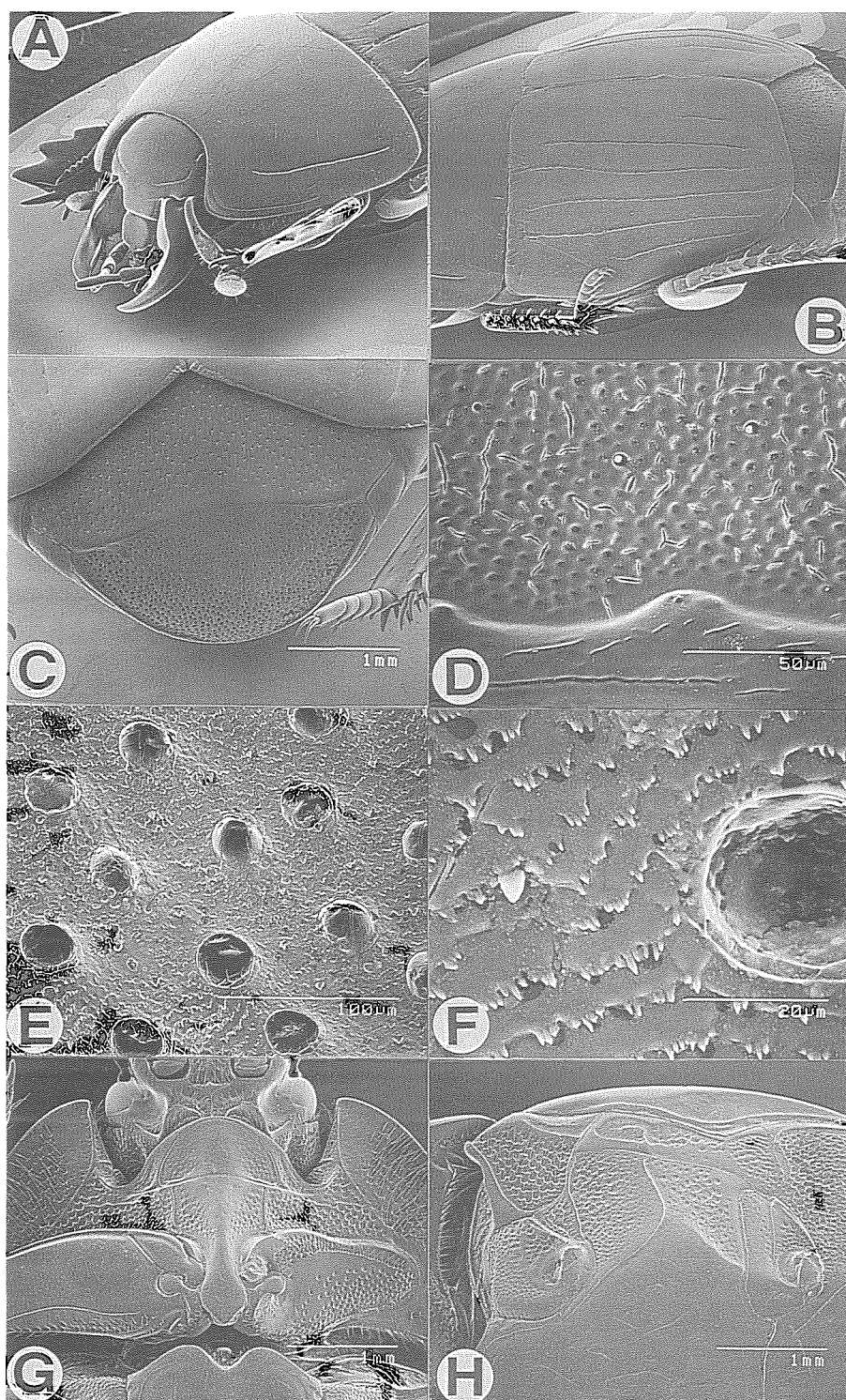
Pachylister (Pachylister) chinensis (Quensel in Schönherr, 1806) (Figs. 26–27)

Hister (Pachylister) chinensis: Bickhardt, 1913, 171 [Taihorin, Kankau (Kôshun), Tainan, Anping, Sokutsu (Banshoryo-distr.)].

Pachylister chinensis: Lewis, 1904, 146; 1915, 55 [Horisha]; Miwa, 1931, 56 [Horisha]; Kato, 1933, pl. 49, no. 2; Kamiya and Takagi, 1938, 29; Ôhara, 1999, 106.

Pachylister (Pachylister) chinensis: Mazur, 1997, 105.

Additional description. Female genitalia as shown in Fig. 27. Spermatheca consisting of 6 small sacs and attached to the dorsal wall of vagina, the wall strongly extruded apically.



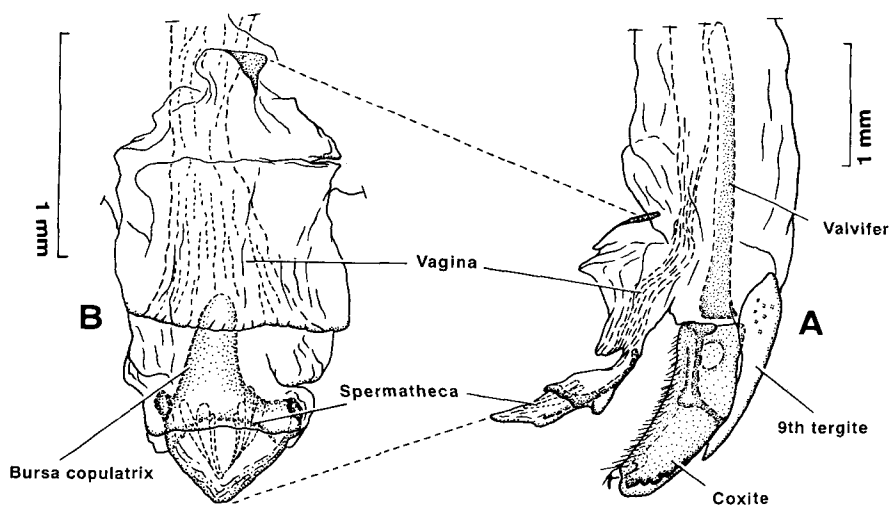


Fig. 27. *Pachylister chinensis* (Quensel). A: Female genitalia, lateral view (left side). B: Ditto, ventral view. [no. 9945, Liukuei].

Bursa copulatrix sclerotized.

Specimens examined.

[Proper] Taipei Hsien: Pali (6 exs., 12/ii/1997), Y.Y. Lien; Ilan Hsien: Chenshant'sun (1 ex., 18/x/1976), M. Kiuchi. Hsinchu Hsien: Hukou (2 exs., 24/x/1971), K. Masumoto. Miaoli Hsien: Penglai (= Kotsubo) (1 ex., 16/vii/1968), H. Makihara. Taichung Hsien: Eastern cost line, Tuli (3/iv/1994), Y.Y. Lien. Nantou Hsien: Nanshanchi (2 exs., 2/x/1984), S. Osawa; (1 ex., 5/viii; 13 exs., viii/1972; 2 exs., 10/vi; 1 ex., 26/vi/1973), Q. Du; (1 ex., 28/vii/1974), K. Masumoto; (1 ex., 2/viii/1976), K. Tazoe; (11 exs., 30/iii/1977), W. Suzuki; Yushin river (1 ex., 11/xi/1986), H. Tanaka; Piilu (2 exs., 22/x/1971), K. Masumoto. Tainan Hsien: Koupi (= Houpi, Kouheki) (6 exs., 8/xi/1976), M. Kiuchi. Kaoshiung Hsien: Near Liukuei (1 ex., 10/vii/1989), C.W. Chen; Liukuei (4 exs., 30/iv; 7 exs., 1/v; 1 ex., 3–7/v/1986), M. Ôhara; (12 exs., 6/iv/1987), K. Baba. Pingtung Hsien: Hengchun (= Koshun) (1 ex., 15/vii/no year), Mogi; Kenting (1 ex., 16/ix; 4 exs., 3/xi; 1 ex., 9/xi/1986; 3 exs., 5/v/1987), H. Tanaka; (1 ex., 16/viii/1968), K. Y.; Kenting Natural Park (3 exs., 26/xi/1990), S. Osawa; (1 ex., 3/vi/1974), Y. Miyake; Shenting Park, Kenting National Park, Hengchun (2 exs., 16/ii/1994; 1 ex., 9/ii/1995; 1 ex., 10/ix/1996), Y.Y. Lien; Sizhonchi (4 exs., 11/v/1986), M. Ôhara. Hualien Hsien: Taroko (2 exs., 20/x/1976), M. Kiuchi; Hsinsheng (2 exs., 10–11/xi/1994, 25/ix/1995), Y.Y. Lien. ? : Taiwan Botanical Garden (2 exs., 2/viii/1968), T. Kusaka.

[Lanyu Is.] (5 exs., 18–22/iv/1986), M. Ôhara; (2 exs., 9/iv/1978), K. Murakami.

Distribution. Taiwan (proper, Lanyu Is.); Japan; Korea; continental China; eastern India; Oriental Region. Introduced to Fiji, Samoa, Australia and Hawaii.

Remarks. This species usually occurs in fresh cow dung.

Fig. 26 (on page 42). *Pachylister chinensis* (Quensel). A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Surface of elytron, dorsal view. E: Punctuation of pygidium. F: Ditto. G: Prosternum, ventral view. H: Mesosternum, metasternum and epipleuron of elytron, ventral view. [A–F: no. 9933, Liukuei, G–H: no. 9935, Nanshanchi].

Pachylister (Pachylister) lutarius (Erichson, 1834)

Hister lutarius Erichson, 1834, 133 [India].

Pachylister lutarius: Lewis, 1915, 55 [Koshun]; Miwa, 1931, 56 [Koshun]; Kato, 1933, pl. 49, no. 5; Kamiya and Takagi, 1938, 29.

Specimens examined. No Taiwanese specimens of the species have been available for my study.

Distribution. Taiwan (?); nearly the whole Oriental Region.

SUBGENUS *SANTALUS* LEWIS, 1906

Pachylister (Santalus) orientalis (Paykull, 1811)

Hister orientalis Paykull, 1811, 17 [East India, China]; Lewis, 1915, 55 [Horisha].

Santalus orientalis: Lewis, 1906, 341; Miwa, 1931, 56 [Horisha]; Kamiya and Takagi, 1938, 29.

Pachylister (Santalus) orientalis: Mazur, 1997, 107.

Specimens examined. No Taiwanese specimens of the species have been available for my study.

Distribution. Taiwan (?); nearly the whole Oriental Region. Introduced to Seychelles.

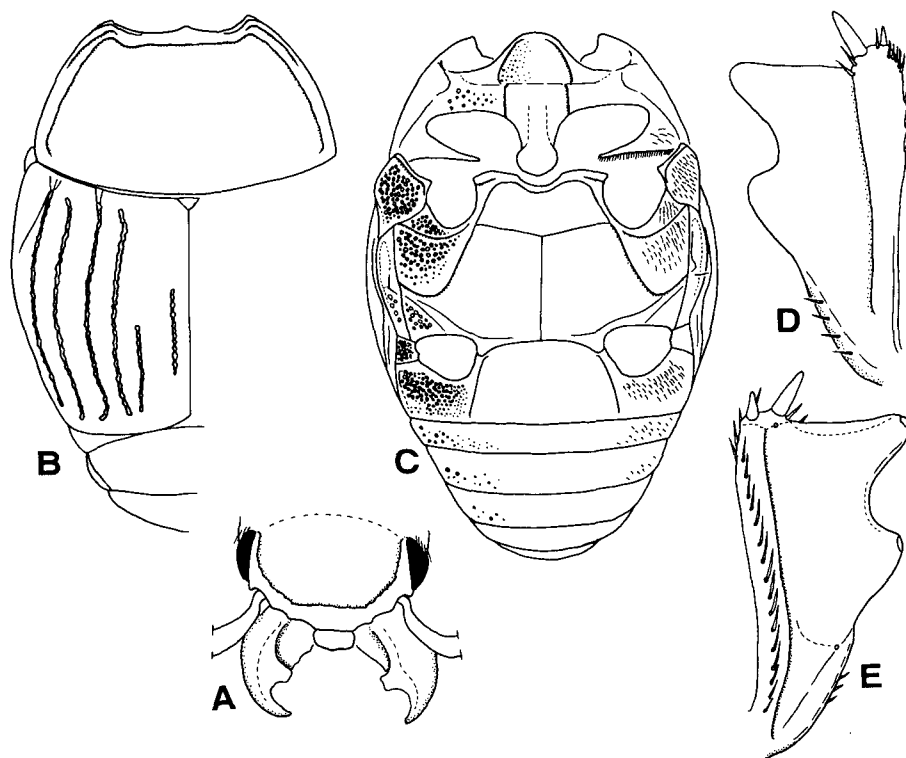


Fig. 28. *Hister javanicus* Paykull. A: Head, frontal view. B: Pronotum and left elytron. C: Ventral side of adult. D: Left protibia, dorsal view. E: Ditto, ventral view. [no. 9919, Chuyunshan, Kaoshiung].

GENUS *HISTER* LINNAEUS, 1758

Ôhara, 1994, 112.

The Taiwanese *Hister* has been represented three species. In this study, I recognize one species, *H. javanicus*.

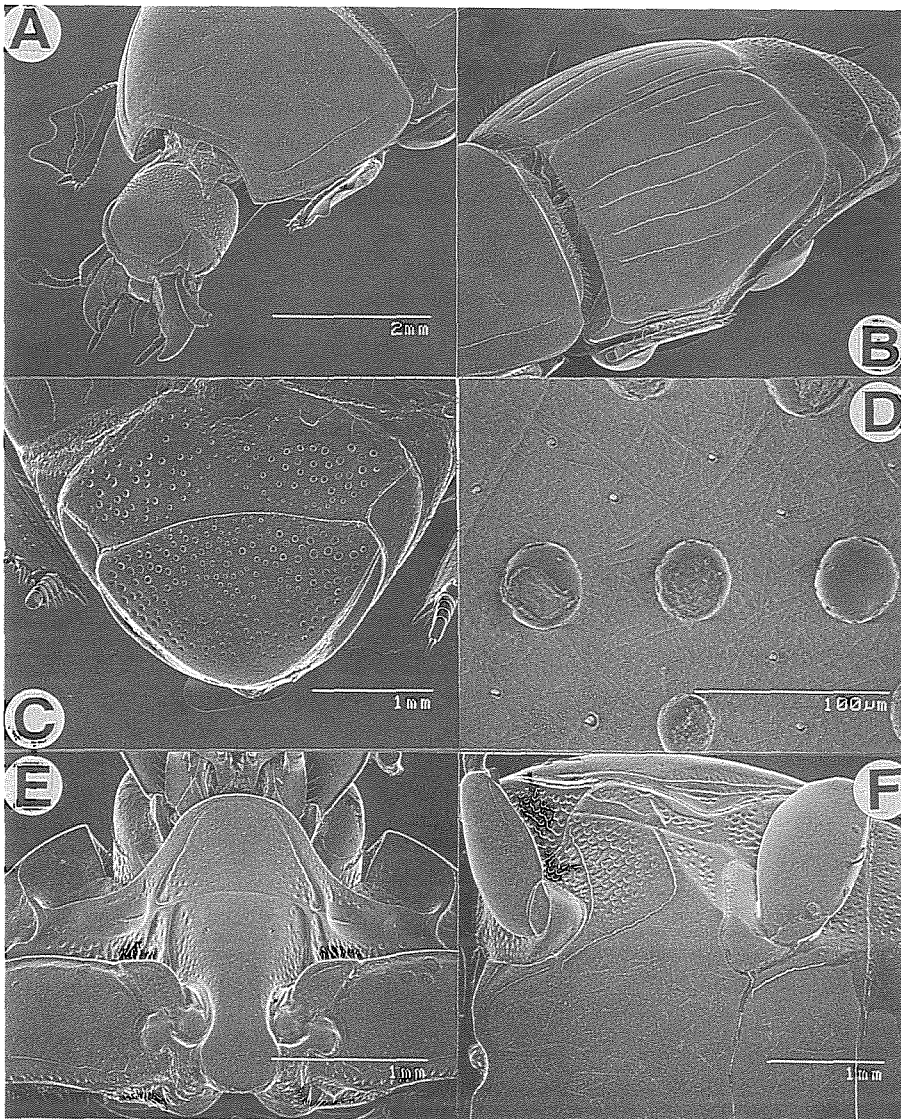


Fig. 29. *Hister javanicus* Lewis. A: Head and pronotum, oblique view. B: Left elytron, oblique view. C: Propygidium and pygidium, caudal view. D: Punctuation of pygidium. E: Prosternum, ventral view. F: Mesosternum, metasternum and epipleura of elytron, ventral view. [A–F: no. 1919, Chuyunshan, Kaoshiung].

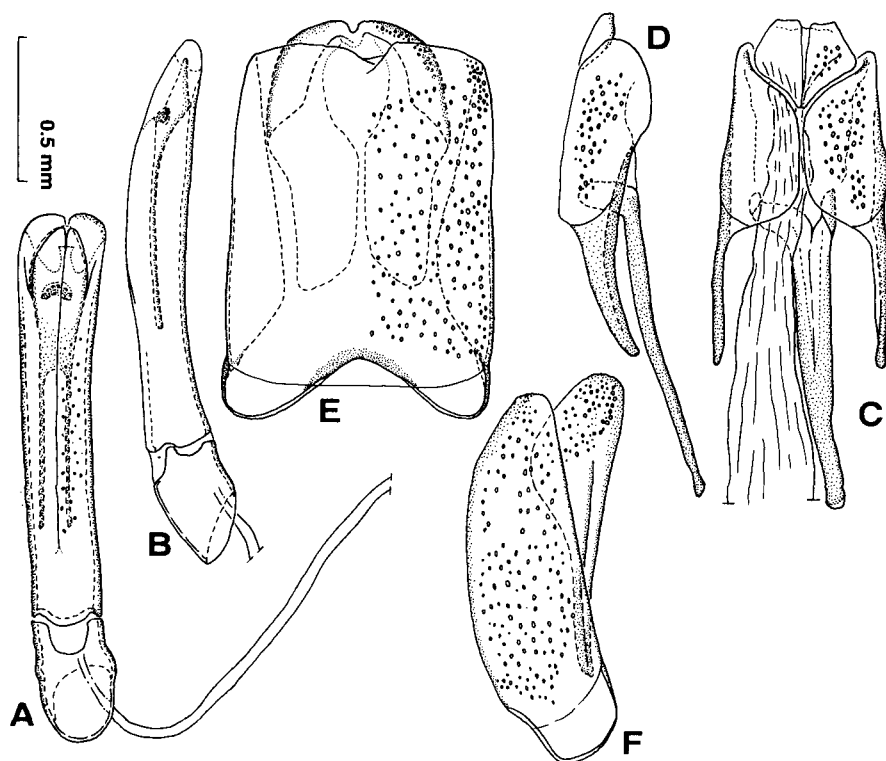


Fig. 30. *Hister javanicus* Paykull. Male genitalia. A: Aedeagus, dorsal view. B: Ditto, lateral view. C: Ninth and 10th tergites, dorsal view. D: Ninth sternum (spicule), dorsal view. E: Eighth tergite and sternum, dorsal view. F: Ditto, lateral view. [no. 9919, Chuyunshan, Kaoshiung].

Key to the Taiwanese species of the genus *Hister*

- | | | | |
|---|-----|--|------------------------------------|
| 1 | (2) | Subhumeral stria of elytron absent. | <i>H. javanicus</i> Paykull, 1811 |
| 2 | (1) | Subhumeral stria present. | |
| 3 | (4) | Sutural stria of elytron present. | <i>H. congener</i> Schmidt, 1885 |
| 4 | (3) | Sutural stria absent. | <i>H. thibetanus</i> Marseul, 1857 |

Hister congener Schmidt, 1885

Hister congener: Miwa, 1931, 56 [Horisha]; Ôhara, 1994, 118.

Pachylister congener: Lewis, 1915, 55 [Horisha].

Specimens examined. No Taiwanese specimens of the species have been available for my study.

Distribution. Taiwan (?); Japan; Korea; Primorskij Kray; northern China.

Hister thibetanus Marseul, 1857

Hister thibetanus: Lewis, 1915, 55 [Koshun]; Kato, 1933, pl. 48, no. 12 [Koshun].

Hister (Hister) thibetanus: Kamiya and Takagi, 1938: 30.

Specimens examined. No Taiwanese specimens of the species have been available for my study.

Distribution. Taiwan (?); India: Assam; Burma; Nepal; continental China.

Hister javanicus Paykull, 1811
(Figs. 28–30)

Hister javanicus: Ôhara, 1989, 38 [diagnosis]; Mazur, 1997, 113.

Hister squalidus: Ôhara, 1989, 43.

Diagnosis based on the Taiwanese material. Biometric data as follows (in mm): PPL 6.25, PEL 4.9, APW 1.65, PPW 3.75, PL 1.95, EL 2.65, EW 4.35, ProW 2.6, ProL 1.0, PyL 1.3, PTL 1.3, MSTL 1.25, MTTL 1.65. First to 4th dorsal elytral striae complete (Fig. 28B). Fifth stria present on apical third, and sutural stria on apical half. Propygidium (Fig. 29C) irregularly and sparsely covered with coarse and deep punctures, which are separated by half their diameter to ten times the diameter. Pygidium convex medially, and deeply and coarsely punctate, the punctures separated by half to three times their diameter and becoming finer apically. Protibia (Fig. 28D, E) with 2 denticles on outer margin.

Specimens examined.

[Proper] Kaoshiung Hsien: Chuyunshan, Logging road, 35 km (1 male., 23/x/1995), Y.Y. Lien.

Distribution. Taiwan; Java; eastern India; nearly the whole Oriental region, introduced to Africa. New to Taiwan.

Remarks. The number of denticles on the outer margin of the protibia is usually three in this species, but in the material of Taiwan it is only two.

GENUS *MEROHISTER* REITTER, 1909

Ôhara, 1992a, 377.

Merohister jekeli (Marseul, 1857)

Hister (Merohister) jekeli: Bickhardt, 1913, 171 [Taihōrin]; Miwa, 1931, 57 [Horisha]; Kamiya and Takagi, 1938, 31.

Merohister jekeli: Lewis, 1915, 55 [Horisha]; Ôhara, 1992a, 378.

Specimens examined.

[Proper] Nantou Hsien: Shihtyutou (1 ex., 7/v/1989), native collector.

[Lanyu Is.] (2 females, 18–22/iv/1986, collected from decaying fish), M. Ôhara.

Distribution. Taiwan (proper, Lanyu Is); Japan; Sakhalin; Kuril Isles; Primorskij Kray; Korea; continental China; Philippines; India.

GENUS ZABROMORPHUS LEWIS, 1906

Ôhara, 1994, 132.

Zabromorphus salebrosus subsolanus Newton in Johnson et al, 1991

Hister punctulatus: Lewis, 1915, 55 [Horisha].

Hister (Zabromorphus) punctulatus: Miwa, 1931, 56 [Shinten]; Kamiya and Takagi, 1938, 29.

Zabromorphus punctulatus: Ôhara, 1994, 132 [Taichung].

Zabromorphus salebrosus subsolanus Newton in Johnson et al, 1991, 13

Specimens examined.

[Proper] Taichung Hsien: Taichung (2 exs., 5/v/1907), S. Matsumura (Ôhara, 1994: 135).

Distribution. Taiwan; Japan; Korea; Indonesia (Java; Celebes; Sumatra); Philippines; Vietnam; Burma; continental China; India.

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